THE

AMERICAN FARMER:

DEVOTED TO

AGRICULTURE, HORTICULTURE AND RURAL ECONOMY.

[FIFTH SERIES.]

"O FORTUNATOS NIMIUM SUA SI BONA NORINT
"AGRICOLAS." . . . . . *Virg.*

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OCTOBER.

"With what a glory comes and goes the year!—
The buds of spring—those beautiful harbingers
Of sunny skies and cloudless times—enjoy
Life's newness, and earth's garniture spread out;
And when the silver habit of the clouds
Comes down upon the autumn sun, and with
A sober gladness the old year takes up
His bright inheritance of golden fruits,
A pomp and pageant fill the splendid scene."

WORK FOR THE MONTH.

TOBACCO.

The work of housing is so far advanced that no farther hints will be necessary but to press on diligently and close up at farthest by the tenth. There is nothing gained by having Tobacco out after that period. Keep doors and windows all open in fine weather, but close on wet or very windy days, and late in the month, if there is danger of hard frost, close them carefully at night.

WHEAT.

Make a point of getting in your wheat as early as possible after the fifth of the month. Have fertilizers on hand and in proper condition for distribution. If Peruvian Guano is to be used, have it riddled and the lumps thoroughly pounded, and mix well with an equal quantity of rich earth and a half peck of plaster to each bushel of Peruvian Guano. If the drill is to be used, it need not be mixed at all.

PREPARATION OF SEED WHEAT.

Neither imperfect nor foul seed should be used. Have a riddle which will pass through all light, imperfect grains, cockle and other small seeds. Wash the grain in strong brine, pouring in slowly and stirring around thoroughly so that every smut ball and all light seeds will float, and may be skimmed off. Soaking for any length of time is not essential, and is attended with some inconvenience and with a loss, probably, of some of the grain. Drain it well in baskets, and dry it on the floor with powdered lime or plaister, or guano. A coating of guano on the seed grain is a very good method of making a small application. Look again at our notes in September number.

TIMOTHY.

If Timothy is to be sown on your wheat land, sow immediately after getting in the wheat, and brush in the seed.

CORN FIELDS.

Do not begin to house your corn too early. Look well to the fences and guard against depredations. If you have gathered tops and blades, get them out of the field and secure early from weather.

PUMPKINS.

Gather up the Pumpkins and bring to a convenient place for feeding to stock.

POTATOES.

Irish Potatoes should be secured the latter part of the month. If you have a large crop, it will well repay the expense to get a potato plough. Pitkin's patent is a very good one, and will throw the potatoes out clear of dirt as fast as ten hands will gather them.

FEEDING HOGS.

The proper way to feed Hogs to ensure the nicest bacon, is to feed in a small lot with a comfortable sleeping place and shelter from bad weather. It is a very important piece of economy, however, to have such an arrangement for feeding as will save from waste the large quantity of very rich manure which is made by the fattening hogs. To do this effectually, they should be put in pens with floors above the ground, to such height that every thing may drop through, when it can be mixed with earth or litter for its proper

preservation. We wish to call the especial attention of our readers to the enormous waste perpetrated every year both in the careless manner in which this manure is preserved, and in the method of feeding. All food should be ground at least and soaked, if not boiled. The more imperfectly the food is prepared, the more valuable is the manure, and therefore it is the more important that it be carefully saved.

SHELTER FOR STOCK.

Begin in time to prepare for winter and be sure that your stock is well sheltered against the weather. Should you be scarce of provender, you will find pine boards a good substitute. Warmth and comfort save a great deal of food.

WORK IN THE GARDEN.

OCTOBER.

SPINAGE.

The growing crops of Spinage should be weeded and thinned.

LETTUCE.

Lettuce plants may be transplanted from the beds into rich, light soil, and close enough to be protected by frames when cold weather sets in.

CABBAGES.

Cabbage plants from seed sown last month, should be planted out this month, when they are intended to pass the winter in a border in which they may be protected by frames, if desired. Put the whole stem into the ground up to the leaves and set them four inches apart. Frames are not essential to the protection of cabbage plants. Being set in the ground now up to their leaves, they are to be planted out finally in March in their natural position and at proper distances.

CAULIFLOWERS.

These should have the same treatment as cabbages, but are more tender and require the protection of glass and sufficient covering in severe weather.

GROWING CROPS.

All the late growing crops should be well weeded and earthed up.

CELERY.

Continue to earth up Celery in dry weather.

ONIONS FOR SEED.

Plant out large Onions for seed towards the latter part of the month. Pick out the largest and best for the purpose, and in rich, well prepared ground.

CARROTS, BEETS, &C.

Take up, the last of the month, Carrots, Beets, Potatoes, and secure for the winter.

THE FRUIT GARDEN.

GATHERING FRUIT.

Examine our notes of last month on the subject of gathering and handling fruit.

PLANTING TREES.

The latter part of the month, trees of all sorts may be planted. In a rich, well worked fruit and vegetable garden, no especial preparation of the ground will be required. But if it is otherwise, trenching to the depth of eighteen inches to two feet, and manuring with rich, well made compost, will be necessary. A thoroughly drained soil is absolutely necessary for the successful cultivation of fruit trees. The fruit garden should be planted mainly with dwarfs of the various sorts of fruit—pears, apples, peaches, cherries, &c.

RASPBERRIES.

Raspberry plants may be put out this month or in the spring. The shoots of this year's growth are to be planted with good fibrous roots. Plant only good varieties. Plant along borders four feet apart and cut the cane back to three feet in length. Put them in good, rich soil, and do not allow them to fruit the first season.

GOOSEBERRIES AND CURRANTS.

Plantations of these may be made this month. New plants may be readily propagated from cuttings.

FRUIT STONES AND SEEDS.

Take care of stones and seeds of fruit. Stones should be preserved in moist earth, or may be put immediately into the ground. Preserve seeds of apple, pear, &c. in dry sand. If you think proper to put these in the ground now, sow pretty thickly in drills two feet apart, and the plants will be fit to take up a year hence and transplanted into the nursery. We commend this matter of raising seedlings to every one who has even a small lot of ground, and every boy, and *girl* too, should learn to bud and graft.

TREES FOR THE SUPPLY OF A FAMILY.

J. J. Thomas, in his valuable work on Fruit Culture, recommends the following as an ample average supply of the various fruits for the supply of a family, with good culture, viz: 40 apple trees, with full share of long-keepers; 20 pear trees, 15 peach trees, 12 cherry trees, 10 plum trees, 6 apricots, 4 nectarines, 5 quinces, 4 grape vines, 30 currant bushes, 15 gooseberry bushes, 20 raspberry bushes, 5 square rods of strawberries.

DISTANCES FOR PLANTING TREES.

We are indebted to the same authority for the following hints on the distances for planting the various sorts:

Apples.—40 feet the greatest distance—33 may suffice. For pyramids on apple stocks, 10 feet; on Doucain stocks, 8 feet; on paradise stocks, 6 feet.

Pears.—Large growing standards, on pear stocks, 20 feet; dwarf standards, on quince, 8 feet; pyramids, on pear stocks, 6 to 10 feet; on quince, 6 feet.

Peaches.—Peach trees the usual way of growing, 20 feet apart. If shortened in annually, as they should be, 12 feet. Budded on plum stocks and headed in, 8 feet.

Cherries.—Common standards, 20 feet apart; pyramids on common stocks, 10 feet; on mahaleb stocks, 6 feet.

Plums.—Standards, 15 feet; pyramids, 8 to 10 feet.

Apricots.—20 feet; pyramids, 10 feet.

Quinces.—6 to 8 feet.

Grapes.—Most vigorously growing native sorts, on a trellis 8 feet high, 25 feet apart; on a 12 feet trellis, 16 feet apart. Foreign grapes one-half this distance.

Gooseberries and Currants.—4 to 5 feet.

Raspberries.—3 to 4 feet.

For the above distances, the following is the number of trees required for an acre:

40 feet apart,	27 trees		12 feet apart,	302 trees	
33 "	40 "		10 "	435 "	
25 "	69 "		8 "	680 "	
20 "	108 "		6 "	1208 "	
15 "	193 "		4 "	2720 "	

[For the American Farmer.]

Fertilizers—Bee Hives.

FALLSTON, HARFORD Co., Sept. 6, 1859.

N. B. Worthington, Esq.

I am glad that you have undertaken to purchase fertilizers for the farmers. If we can judge from results, there is much deception or ignorance practiced. I have used three of those which I thought well fortified by certificates of respectable farmers, and could not perceive any benefit except one: the grass, I thought, showed it. I used it on *corn*. I then had a crop of oats and wheat, with grass. One of them, I was assured, would improve the land, no matter how poor. I have waited about five years and not the least improvement yet. I used Peruvian Guano, likewise barn-yard manure adjoining, and they both did *their* duty. Many of my neighbours, together with myself, are afraid to try any more of them. If you will do us justice, just so sure will your business increase and the farmers be benefitted.

Many farmers around me are using bones, with sulphuric acid. Those who used this preparation last spring are disposed to try it again this fall. *Vitriol* is a *dangerous* article, and the best way to deal with it is to have a good barrel, with the proper proportion of water in it, and let the chemist of whom they purchase it, empty the vitriol into it; it would then be very harmless. This would save the trouble of returning the carboy.

I have often read essays about the honey bee. The writers tell us all about their habits; all this does not teach us how to make them *profitable*. I find that a hive about 12 inches across outside and 14 inches high, with a box on the top about 6 inches high (to fit the lower box.) The upper box should have an opening, say 3 inches by 6 or 8 inches, with glass fitted in it, with sliding cover on the back, for the purpose of looking through occasionally to know when it is filled with honey. There should be about four 1 inch holes on the top of the lower box to let the bees pass into the upper, which is without a bottom. As often as the upper box is filled, take it off, move it frequently from the hive in the direction the wind is blowing; take a bush and brush the bees off as fast as they appear, and when all have left, cut the honey out and return the box to the top of the hive again. They will fill it sometimes two or three times during the season. There is enough in the lower hive to sustain them through the winter. If the upper box is put together with screws, it will enable you to take the honey nearly whole—first running a sharp knife close along the sides, and when the sides are taken off, run the knife along the top. The above method will enable one to take honey without destroying the bees—also to get on without buying *costly patent hives*.

After my marrow squash pumpkins had begun to blossom, I examined the vine just above ground and found, by cutting open with a sharp knife, there were one or more large white worms, which I destroyed Though some vines were killed before, I have not noticed any to die since. I should have examined them earlier, for since I wormed them, they have blossomed more freely. The bugs have not injured them this season.

Respectfully yours,

WM. H. MORGAN.

[For the American Farmer.]

Seedling Apples.

MOORFIELD, VA., Sept. 10, 1859.

MR. EDITOR: There are two specimens of seedling apples, now in growth, which are but little known out of the neighbourhood where they originated, but are of such superior excellence as should entitle them to a place in the front rank of every private collection of choice fruit, and their more general propagation a source of profit to nurserymen and commercial apple growers. As a means of conveying a knowledge of the above fruit and its locality, and of rescuing from its present obscurity a fruit of such value, and thereby adding two more choice varieties of apples to the general stock of the country, I must ask a small space in your paper. The names of the above apples are the *Schell* and *black* apples.

The first named originated on the small farm of an old gentleman by the name of *Schell*, situated on what is called Knobley Mountain, in the county of Hardy, in Western Virginia, where the original or parent tree is said to be yet standing and continues to bear. The tree is a rapid

grower, and comes into bearing at a very early age. It is easily propagated by suckers, which it throws up freely in loose ground. The fruit is large and beautiful, of a bright yellow colour, round and a little feathered at the poles. Its flesh is a fine glistery gold colour, and of exquisite richness of flavour, slightly more acid than the Hamet Queen, and very juicy. It has no superior as an eating apple when fully ripe, which it is in the middle or latter part of August. It is an abundant bearer, and as an apple *for all uses* (except long keeping) I consider it has no equal. It is one of the best for drying purposes, retaining its rich yellow colour when dried as perfectly as when just from the tree, and retaining its plumpness, losing but little by shrinkage. It is an universal cooker in all forms, and a great favorite with housewives on that account. But its most prominent excellence as an apple of commerce, is the large per cent. of its yield for cider and distillation and the peculiar flavour and quality of its product for these purposes. The tree is of easy growth, and is well suited to the climate of the Middle States.

The Black Apple is also a seedling, and originated in the county of Hardy, though its origin dates much farther back than the Schell. It is called the black apple from its dark olive or smoky colour, though it bears no relation to the black Coale family, nor the least resemblance to it. The tree is of tardy growth, yet it attains a gigantic size and is as hardy as a forest oak. It is a never-failing bearer, and its yield is enormous. I have known a full road wagon body taken from a single tree now standing in the orchard of the late Felix Seymour, Esq., near Moorefield, the county seat of Hardy. The tree sends up no suckers, but is readily propagated by grafts, which take kindly; the fruit is of medium size, but somewhat irregular, of rather oblong shape. It ripens in November and keeps for years; it is of rocky hardness until pared, when the flesh is of a crisp and sugary grain, and of yellow hue and of the most exquisite flavour, resembling much the Greening, but of superior taste. Its greatest excellence, however, in conjunction with its delicacy of flavour, is its long-keeping quality, and as a merchantable apple, is superior to the Russet as a long-keeper, by reason of retaining its solidity and never becoming tasteless or shrively from age. It will keep in almost any temperature, if carefully picked, and its hardness and tough skin defends it from bruises when shaken from the tree. These apples have been but little known out of the county where they originated, but are great favorites there, and no orchard would be complete without a stock of these trees. They are plentiful on the farms of the wealthy gentlemen of the South Branch, who would no doubt be pleased to afford any facility for their general dissemination, and I would suggest to nurserymen to lose no time in supplying themselves with grafts, from which to propagate these valuable fruits.

ALPHA.

BRITISH EXPORTS.—The exports of British and Irish produce and manufactures in the half year ending June 30th, 1859, are £63,003,159, giving an increase of nearly ten millions pounds sterling over the corresponding period in 1858.

Timothy—Its Origin.

FAUQUIER CO., VA., Aug. 29, 1859.

To the Editor of the American Farmer:

I send you the following extract from an old letter in my possession, as a piece of agricultural history. It shows that *Timothy* was sown as a pasture grass so early as 1784. I have an indistinct recollection of having read (probably in the *Farmer*) that Timothy was introduced more recently by a gentleman of Maryland, from whom it took its name:

"*Charming Molly, in the river Delaware,*
Dec'r 12th, 1784.

* * * * "A vessel has just now anchored by us. She is bound to Virginia, to Rappahannock—I shall send my letters by her. Believe me, my dear fellow, that in idea I now transport myself to your mansion at Millenbeck. 'Tis now almost 12 months since I first visited you there. Did the wheat turn out well? does the Timothy afford blades for your sheep to nibble at? Pardon me for these inquiries; I never fail to pay attentive observation to the modes of cultivation in use with *your skilful farmers*." * *

The letter is written to Dr. Wm. Ball, of Lancaster Co., Va. I have a great many old letters—in many of which are items of cotemporaneous history, in reference to farming and other matters. If you think they will be of any interest to you, it will give me pleasure to send them. Enclosed I send you a bill of lading of the old style; there is one like it framed and hung up in the Corn Exchange, N. York, as a curiosity.

With best wishes for your success, your friend,
R. W. D.

In the second volume of the *American Farmer*, page 38, of the date of April 1820, is the following account of the name of Timothy as applied to the *Phleum Pratense*. So far as we are informed, this grass was probably known in England previous to its introduction here, but the successful cultivation of it in Maryland brought it into more general and favorable notice, and gave it the name of the gentleman who cultivated it. The correspondent of the *Farmer*, in 1820, says:

"For the introduction of Timothy grass into the State of Maryland, the farmers are indebted to Timothy Hanson, the father of Jonathan Hanson, who built the first grist mills on Jones' Falls, now forming a part of the city of Baltimore. This gentleman resided in Baltimore about 70 years ago (about 1750); and was the first person to bring the grass into cultivation. I believe Mr. Hanson was a native of one of the New England States, and whether he discovered the value of this grass, growing in the neighbourhood of his mill, or brought the seed on with him, I cannot say; but he had certainly the *honour* of introducing it to the public, and when it first came into fashion, it was called TIMOTHY HANSON'S GRASS and sold in "*Baltimore Town*" by that name."

The bill of lading our friend sends is a curiosity. It runs thus:

"Shipped by the grace of God, in good order

and well-conditioned, by William Downman, in and upon the good ship called the Major Handy, whereof is Master under God, for this present voyage, James Cooper, and now riding at Anchor in the River Rapahanock, and by God's Grace bound for London—to say—four Hhds. Tobacco on acc't and risk of Mr. Rawleigh Downman, &c."

And concludes:

"And so God send the good Ship to her desired Port in Safety. *Amen.*

"Dated in Virginia, 16th Day of June, 1760."

Our friend will oblige us by any extracts from the letters mentioned, that may be interesting.

[For the American Farmer.]

The Seven Field System of England.

As I proposed to give you some description of the rotation of crops pursued in England, by some of the best farmers, I will commence with that of the turnip. The English farmer considers this the most important of all. When a good crop is secured (and it seldom fails in England when well put in,) and is fed off upon the land, it requires no more manuring for seven years, on the seven field system, which is as follows:

The oat stubble is ploughed up as early as possible after the oats are off. This lies until late in the fall, when many of the weeds in the soil spring up. It is then cross-plowed with very wide furrow, leaving a space between each of them for the frost to penetrate. It is frequently plowed in winter, when the frost is not too hard to prevent it. Thus it lies until the spring sowing is done. The manure is collected in winter from every quarter it can be obtained, and drawn into mines for compost, on this fallow; each mine is once turned in the course of the winter, and well mixed together. I have known farmers draw manure eight miles for this purpose. If he cannot get a sufficiency to apply to this fallow, he finishes with guano, which will produce them equally good as the compost manure. There are men in England who hoe the turnip crop the first time (which is the most important) by the job. I have known the price to vary from three shillings to twelve (sterling) per acre, according to the cleanliness of the fallow and nature of soil. This crop is fed off by sheep, while a portion of the largest are drawn home to feed bullocks in their stalls, with oil cake, and straw, or hay, and which produces an excellent strong manure to mix in the compost heap. Most of this oil cake is purchased from other countries—America and Russia, principally. If the farmer gets only the manure for feeding, he considers it a good profit.

When this crop is fed off the land is left in a very high state of cultivation, and a light turnip soil is always much benefited by the treading of sheep. I have known seven quarters (56 bushels) of barley grown upon an acre, 64 bushels have been known to grow upon an acre, after turnips, and upon a light soil. After the barley crop comes clover and rye grass, this is mown and afterwards fed by the sheep. The next year pastured, plowed up in August for wheat, one plowing is all that is necessary, and a crop of 40 bushels to the acre is frequently obtained. Part of the wheat stubble is sown to winter vetches, a little rye is sown with them to produce the feed more early; as soon as fit the sheep are put upon them, and allowed a square pen each day, as much as they will consume; the same hurdles that divide off the turnip crop, are brought here for the same purpose, this gives the land another treading and also another slight manuring, made by the sheep, from this green crop. After this an extra turnip crop is grown the same year. This crop is produced with guano; those grown from the early feeding are frequently an excellent crop, the later ones produce a great quantity of tops for spring feed; this leaves the land in excellent condition for the last crop—oats. I have known from 60 to 70 bushels of oats produced to the acre by this system, and the land is improved by it. I never saw a deficiency in crops where a farmer pursued this course; but I have seen many farmers in England who have no system at all, and whose farms were adjoining, whose pockets and soil were exhausted; while the other could ride in his carriage, with ample means to support it, obtained by his skillful management.

My impression is, that the same system can be pursued as profitably in Maryland and Virginia, as in England. Raise your turnips with guano, and well husband the manure you make, and apply both plentifully to the turnip crop, then neither land or pocket will be impoverished.

I have been trying an experiment with the guano introduced here by Mr. J. B. Sardy, of New York, who has seven vessels in the trade; it is called the American Guano. My experiment is with an acre of Skirving Swedes, (Rutabaga,) putting on two hundred weight to the acre, in the dust,—and the eighth of an acre in the liquid, double that quantity; both of them look promising. I never saw a finer crop at this time of the year for the time sown. They are equal to any thing I ever saw in England at the same age. Should this guano prove as beneficial for the turnip crop here as it has done in England, it would be an everlasting blessing.

WM. HENRY SOTHAM.

Owego, New York.

The Hog and its Food.

The propensity to acquire fat in many animals seems to have been implanted by nature, as a means of protecting them against certain vicissitudes to which they might be exposed. The hog fattens most rapidly in such a state of atmosphere as is most congenial to his comfort—not too hot, nor too cold. Hence, the months of September, October and November are the best for making pork. The more agreeable the weather the less is the amount of food required to supply the waste of life. It has been found by experiment that a field of red clover is the best and cheapest place to keep hogs in during spring and summer months, where they can have a plenty of water, and the slop from the house, and the sour milk from the dairy. All sour feed contains more nitrogen than when fed in a sweet state. The first green herbage of the spring works off the impurities of the blood, cleanses the system, renovates the constitution and enables the animal to accumulate a store of strength to carry it forward in its destined course. A small patch of oats or peas to turn into when the

clover fails is good. Some object to fattening hogs so early in the season, the Indian corn is depended upon for the purpose, not being matured. Taking all things into consideration it is better to feed corn before it is ripe, as in that state it possesses considerable sweetness, and most varieties are in milk by the first of September, the hogs will chew it, swallow the juice and eject the dry fibrous matter. At this season of the year swine can be fed on articles not readily marketable, as imperfect fruit, vegetables, &c. When such articles are used, cooking them is generally economical. Pumpkins, squashes, potatoes and apples boiled or steamed, mixed with one-eighth part in bulk with mill-feed or meal, whey, and milk left to sour, will fatten hogs fast. In this state they will eat it with avidity and derive more benefit from it than when fed in an unfermented state. Articles that are of a perishable nature should be used first, to prevent waste as it is desirable to turn all the products of the farm to the best account. Another quite important advantage of early feeding is, the less trouble in cooking the food and keeping it in proper condition to feed out. The convenience of feeding is promoted as there is no expense or trouble to guard against freezing.

The more you can mix the food the better, as they will thrive faster on mixed food than when fed separately. In feeding, no more should be given at a time than "eaten up clean," and the feeding should be regular as to time. It is of the greatest importance to get the best varieties, those that are well formed; and have an aptitude to take on fat readily, and consume the least food. As to which is the best kind, there seems to be a great diversity of opinion, some preferring one kind and some another. The Suffolks come to maturity earliest and probably are the most profitable to kill at from seven to ten months, but I prefer the Berkshires to any I have ever kept. A cross of the two make good feeders and the pork is excellent, they will usually weigh from 250 to 300 lbs,, at the age of eight to ten months. The better way is to have the pigs dropped about the first of April, and feed well until December, and butcher. From a variety of experiments I am satisfied that it is wrong to let a hog remain poor twelve months of its life, when it could be made as large in nine months as it generally is at fifteen months. And I conceive it a great error with our western farmers to feed their corn to hogs without grinding. If pigs are kept well for three months after being dropped, they cannot be stunted after that even if the feed is cut short. It is now the opinion of our good pratical farmers that feeding apples to swine is profitable, and that there is no crop that pays better according to its cost, being fully equal to potatoes by measure, while the expense is not more than three or four cents per bushel. They are better to feed to stock hogs in a raw state than potatoes,—indeed from my own experience, I have found but little benefit in cooking apples for swine. It is desirable that hogs should be provided with a dry floor for eating and sleeping only, the whole pen completely sheltered from the atmosphere, to save any washing or waste of manure. One other suggestion and I have done: every farmer should see that the commonwealth of the piggery is furnished with plenty of straw, potato-vines, leaves, saw-dust and the like, with an occasional load of muck, and almost any quantity of weeds' pea and buckwheat straw, all of which will be converted into the most efficient supports of vegetable life. Hogs are the best composters known, as they delight in upturning any such articles as the farmer wishes to convert into manure for the coming year.—O., *in American Stock Journal.*

Pastures—Improving Them.

In many districts, where pasturing is preferred to soiling, it is important not only to maintain pastures in heart, but to improve them when practicable. From a series of experiments; we are satisfied that there is no difficulty in such improvement. The first great desideratum is to fairly under-drain pastures, and thus to secure ourselves from drougth, while the tillering of the plants will renew those whose crowns may be broken by the tread of the cattle. Where this cannot be done, or the owners are unwilling to incur the expense, then the following system may be adopted: the improved lifting sub-soil plough may be run in the direction of the slope, commencing always at its lowest point, to full depth and at distances of three or four feet apart; this will lift the whole surface of the field without deranging, injuring, or overturning the sod. The action of this lifting sub-soil plough is to loosen the whole soil, even around the roots of the grass; its cut lets in the atmosphere, while the disturbance of the soil secures a continuation of the tillering principle, renewing all broken plants and filling the surface with a compact, strong growth. —Where the soil is unctuous, and the sub-soil plough cut raises a trifle, the passing of a light roller following it, will close the cuts, and flatten the sod without permanently shutting the apertures. The atmosphere may thus circulate through the loosened soil, depositing moisture and the fertilizing gases, assisting in the decay of dead roots and in the formation of new ones, furnishing the chemical conditions for the further development of the inorganic constituents of the soil, and insuring a materially increased crop. With such treatment, and a top-dress of two hundred weight of Nitrogenized Super-phosphate of Lime per year, a pasture may not only be permanently maintained, but its yield may be doubled.

In many parts of our country grazing is now the more important style of farming, and any of the methods we have suggested, will be found highly valuable. Light top-dressing of from one to five bushels of salt per acre will be found useful; for minute quantities of salt in solution, like ammonia, assist water as a solvent of the inorganic pabulum of the soil during the vital action of plants. It has been truly said, that an under-drained and sub-soiled meadow never runs out, and this may be said with equal truth of a frequently sub-soiled meadow, where under-drains are not used; although the yield is not so large from sub-soiling alone, as from under-draining and sub-soiling, still it is much greater than where the sub-soil plough is not applied, while the practice of top-dressing is rendered, by such means, highly profitable and entirely practicable. —*Working Farmer.*

The brave are always generous.

[For the American Farmer.]

Improved Culture in Edgecombe Co., N. Carolina.

Mr. Editor: We presume all matters relative to improved cultivation and the development of agricultural resources, will prove of interest to your readers. Hence we propose to give a brief account of a late visit to the county of Edgecombe, N. C., noting the remarkable advances made in that county of late years in agricultural improvements.

We were induced to make a hurried visit to Edgecombe in the early part of the present month, in order to examine the growing *Cotton crop*, for motives of personal interest and gratification, and we may be permitted to add, that the result of our investigations were in the highest degree satisfactory.

Edgecombe county, from its unexampled advances in the improved cultivation of cotton, has acquired a deserved notoriety throughout the cotton-growing regions of the South. Fifteen years ago it was regarded as one of the least productive counties of the State, its entire crop at that period being less than 3,000 bales of cotton.—Some idea of the great improvement made since that time may be had, when we state upon reliable authority, that its last year's crop was upwards of 18,000 bales. Lands that at the period referred to were totally unproductive, are now producing crops of cotton that would gladden the eye of any beholder. We saw land bearing magnificent crops that we were informed would not have sold for $2 per acre fifteen years ago.

The soil of this district of North Carolina is remarkable, at least to one familiar with the soil of the upper counties of Maryland. It is a very light silicious soil of very fine texture and of a dark drab colour, with red clay sub-soil. It is entirely free from stones, or what in the South are called "rocks;" not a pebble as large as a grape-shot can be found in a day's walk over the plantation. Hence it is cultivated with great ease and facility. The country is generally level and would be classed under the general term of "up and bottom land."

The vast improvements of Edgecombe county are the results of the individual and combined enterprise of its planters, developed in a thorough *system of draining*, by which lands formerly regarded as almost useless, are brought into profitable cultivation; and a system of manuring with compost and other domestic manures, with, of late years, a liberal though judicious use of guano.

Large canals—ten feet or more in width, by seven to eight feet deep—have been constructed, running through long distances of country,—these canals have been constructed by the united enterprise of the planters through whose plantations they pass, for the purpose of affording outlets for the drainage of their plantations. The advantages resulting from this system are incalculable; vast forests of swamp land, heretofore inaccessible for any purpose, are now rendered suitable for grazing, and afford, moreover, an inexhaustible source of rich alluvial deposit, which has accumulated for centuries, and is invaluable as manure, when thus made accessible.

The system of manuring is systematic and thorough, being repeated in like manner for every crop. Everything on the plantation capable of being converted into manure is put into the *compost heap*. After the crop has received all the cultivation required, say up to the first or middle of August, the whole available force of the plantation is set to work in the swamps, digging and hauling out the rich alluvial deposit referred to above, which is again deposited in a large heap or heaps, ready for composting or being hauled out on the fields at the proper time. All the old wood and fallen trees are systematically burned for the ashes. The cotton seed is also regarded as fine manure, and is used for that purpose. By this and other means, a vast amount of valuable manure is accumulated every year.

The general method of application is to put one hundred and twenty (five bushel) cart loads of compost, made from the above material, with the other made manures of the farm, per acre, with fifteen to twenty bushels cotton seed, either mixed with the compost or separate, and in addition to this, seventy-five to one hundred and fifty pounds of guano per acre, in the drill. By the use of these means a failure in the crop is rarely heard of. These operations are repeated every year, and crops are grown upon the same field from ten to fifteen years in succession, with improved results every season.

With the advance in increased product in Edgecombe county, has also been developed great improvement in the economy with which the crop is cultivated and saved. For example: the same number of hands perform a much greater amount of labour, with greater ease and facility, than was formerly secured.

Fifteen years ago, picking 40 pounds seed cotton was considered a fair average day's work for a hand. Now, we were informed, 200 pounds per day is a fair average picking for each hand, including hands over ten years of age, and it is not uncommon for superior hands to pick so much as 400 and 600 pounds.

The luxuriant fields of cotton are not the only evidences of prosperity and advancement seen by the visitor to Edgecombe county. The elegant residences of the planters, dotted all over the county, with their cultivated lawns and enclosures, are the sure indications of the refinement and taste always incident upon successful enterprise.

Our visit was necessarily brief, and was hence limited to the country immediately surrounding the town of Tarboro', which is located on the Tar river, about fifty miles from the seaboard. Tarboro' is the county town of Edgecombe, and was settled so far back as the times of the colonies. One rarely meets with a more beautiful village than Tarboro'; it contains from 1200 to 1500 inhabitants, and presents an air of neatness, thrift and comfort not always exhibited by the rural towns. Its avenues on either side are lined with shade trees, which presents the appearance, at a little distance, of a beautiful grove, with church spires towering above the tree tops. Many of the planters of the surrounding country have erected beautiful residences on the suburbs of the town, where they enjoy all the conveniences arising from nearness to the village.

Among the plantations we visited with great interest and gratification, were those of Messrs. B. Staton, E. Cromwell, and the Messrs. Law-

rence. The crops of these gentlemen manifest the highest state of successful cultivation. We regret very much that the limited time at our disposal prevented our visiting the plantations of Messrs. Jesse Powell, D. Balluck, R. R. Bridges, H. S. Lloyd and others. The plantations of these gentlemen, we were informed, are among the finest in the county, and present fine specimens of the wonderful improvements which have been developed in the county of late years.

There is no more cheering sight to one interested in agriculture, than vast fields of cotton at the time of blooming. We saw fields extending as far as the eye could reach, covered with the verdant weed, interspersed all through with blossoms of the purest white, with a like number of blushing pink colour. The blossom unfolds its tender leaf a snowy white, and after one day's exposure to the "rude winds," changes to a delicate pink, and in a few hours falls to the ground, thus ending its brief existence after serving the purposes designed by nature.

We left the cotton fields of North Carolina fully impressed with the conviction that, verily, "Cotton is King."

JOHN S. REESE.

Baltimore, August 1859.

[For the American Farmer.]

Cotton Seed Oil—Mills for Grinding Wanted at the South.

Mr. Editor: The subject of cotton seed and its oil having been brought before the public recently in connection with a new hulling machine, I am induced to ask if you can give your readers any information about oil mills, their extent, cost, capacity, &c. You are, perhaps, aware that the seed of the Long Staple or Sea Island Cotton is furnished with little or no nap; that is, the cotton proper leaves the seeds almost clean, many of them being entirely so. This, of course, renders it more valuable for pressing, inasmuch as there is nothing to absorb the oil, and consequently no necessity for hulling on *that* score. It is probable, nevertheless, that the quality and colour of the oil would be improved, though the quantity be not increased by that process. There are several millions of pounds of cotton seed of this kind, annually produced in this vicinity, say within fifteen or twenty miles of this place; and it becomes an important question whether it could not be made to pay vastly more than it now does—used as it is, only for manure. Its undue bulk renders it expensive for transportation; but pressed into oil on the spot, would it not yield an income more than sufficient for the purchase of other fertilizers? The cake, or residue, could be, as now, applied to our fields, or more economically fed to our domestic animals. While in Connecticut, a few years since, on a short visit, I was informed by a highly intelligent gentleman doing business in New London, that there were two mills in that vicinity engaged in pressing oil from Sea Island cotton seed, obtained from the islands on the Coast of Georgia; and that it was paying them well, although the price was then forty-two cents per bushel, and occasionally reached fifty. Now it seems to me that if it can pay to transport it so far that its enhanced price reaches the first of the above figures, it cannot fail to be a profitable business where it can be bought at 25 or 30 cents, frequently at much less than the former quotations, and seldom or never exceeding the latter. I purchased once, at a well attended auction, 700 bushels at 10 cents, which, I need not say, I used as manure.

If we could get a man of energy, coupled with *actual experience* in the particular business of oil-pressing, to come among us, and take a pecuniary interest in the enterprise, it is highly probable that there is capital enough here ready to be invested to secure the speedy erection of the necessary buildings, and meet all the expenses requisite for an early start. Yours, &c., J. A. J.

[For the American Farmer.]

A Chapter on Wheel Plows.

Mr. Editor: Permit me through your columns to recommend to those of your readers who are making arrangements for their fall plowing to get a plow with a wheel attached, or if they have satisfactory plows, then to make them still more so, by attaching a regulating wheel just behind the clevis. I make this suggestion because, in riding around the country, I have seen so few wheel plows used. I myself never used one till this summer, and then only did it to please a friend, in whose judgment I had considerable confidence, but I assure you I will not consent to do without them again. I was so well pleased that I attached one to my small furrowing plow for corn, and was very much pleased. In getting one, secure, if possible, *wrought iron* mountings, lest any unlucky side stroke against some stubborn stump, should place your wheel where so many of the Austrians were left: "*Hors du combat.*" But do not postpone getting the wheel on that account, for I can assure you the cast iron frame is better than none. And now that I am talking of plows, which one of your plow-manufacturing readers, has for sale a plow to which there are adapted, both steel and cast iron shares—I have long felt the need of such a plow—and which can be sharpened several times before it is worn out. Cast iron shares are but dull tools at best, yet they are the best adapted to stony and gravelly soils, while steel share is best suited to loamy and clayey fields. But if there is no such plow made, who will make such an one that will be just adapted in its *improved form* and *improved share*, to the wants of the large mass of farmers and planters? The wrought shares must be cut out from the plate, shaped, pressed and punched at a single stroke of a steam press, then and not till then can they be made to compete with the cast iron share. When such a plow is furnished and then fitted with the rotary subsoil-attachment, we will then have a complete plow adapted to all situations. I hope "a word to the wise" will be sufficient. Yours, &c.,

A. V. D.

☞Nahant was purchased 250 years ago by a Lynn farmer, for a suit of clothes, and instead of being a fashionable watering place, it abounded in wolves and deer. Now, the wolves there appear in sheep's clothing and the deer in crinoline and costly silks.

Agricultural Schools and Colleges.

The importance of agricultural education is beginning to be understood and appreciated in this country, and it is high time it should be so.

Agriculture as a profession will never attain the elevated position it is entitled to, until it is made the subject of thorough scientific and practical education. All great improvements in every pursuit of practical utility have been made by men thoroughly accomplished in the scientific relations of the pursuit to which they have given attention. All useful arts and occupations have their foundation in some one of the sciences, and that science is of little benefit to mankind that does not form the basis of some useful art.

Agriculture is both a science and an art. The farmer who cultivates his soil without a knowledge of the science, does so simply by rule. He cultivates his field of corn a given number of times and ways, because it is the rule to do so, and because experience has taught him it will not flourish unless thus cultivated. He permits a field to lie in fallow, in order, as he expresses it, to "let it rest," because it is a rule to do so, and experience shows it to be advantageous. But he knows not *why* it is the rule to cultivate his corn at given times, nor why it is advantageous to allow his field to lie in fallow, any more than the builder knows why certain results will follow by working after given rules. The builder in this case has no knowledge of architecture, or the principles upon which the rules by which he works are founded, hence when he works to the end of his rule he can go no further. The man who works in this way, labours to great disadvantage when compared with the thoroughly educated, because he is unable to avail himself of opportunities of improvement, which are constantly occuring. This applies to agriculture as well as to any other art. Hence the great importance of agricultural education.

It is only of late years that this subject has received any attention, and scarcely a half century has passed since the first agricultural school in the world was established.

We extract the following account of agricultural schools and colleges from Chambers's New Encyclopedia, now in course of publication:

"The first agricultural school was founded by Fellenberg at Hofwyl, in Switzerland, in 1806. His pupils were taken from the poorest class of peasantry. They were taught by a combination of discipline, study and manual labour. No fewer than 3,000 pupils were trained in this school, which flourished for thirty years. Since then, various institutions of the same kind have sprung up on the Continent. In France there are several supported by the State, the principal being the one at Grignon, to which an old royal palace, with its domain of 1185 acres, has been given up.

In Prussia there is scarcely a province that does not boast its agricultural school and model farm, and indeed throughout Germany as well as in Russia, we find educational institutions supported by the state, in all of which, agriculture is practically as well as theoretically taught.

In 1845, an agricultural college was established at Cirencester, England, by private enterprise, for the education of both resident and non-resident students. A large farm is attached to the school, which has acquired a high reputation, and is in every way prosperous.

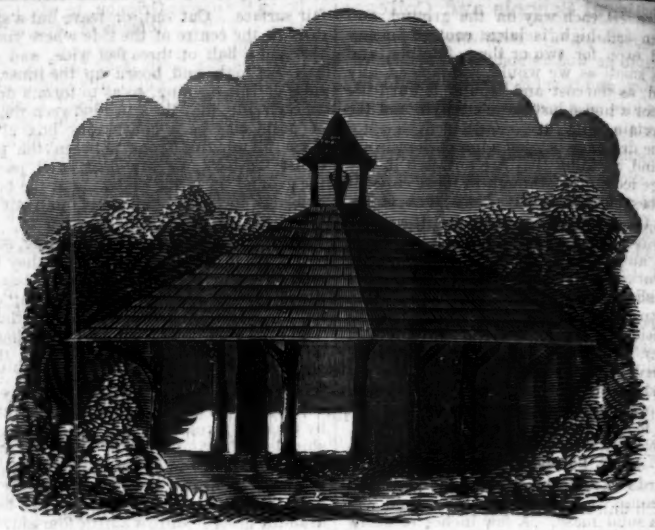
In Scotland, special instruction in agriculture has taken the form of lectures at universities, provincial associations, &c., by which, as well as by the labours of the Highland Society, much valuable knowledge has been disseminated. Private agricultural instruction is also given by farmers, who board and educate students for a stipulated sum.

In Ireland, the Commissioners of National Education have judiciously paid special attention to agriculture. Altogether Ireland has 166 farm schools, with land attached, ranging from 2 to 180 acres. Glasnevin Training Farm was established by the Commissioners of National Education in 1838 and enlarged in 1849. Its professed design is to supply young men with instruction in the science and practice of agriculture. Two classes are admitted to its benefits; the first including two divisions, both of which are gratuitously boarded, lodged and educated. The first division consists of prospective land-stewards or farmers, drafted from minor institutions, undergoing an extra-examination, and receiving a two years' training. The second, of literary teachers, who wish to qualify themselves for conducting agricultural schools, and whose period of training extends to one year only. The second class is composed of young men who board and lodge in the immediate neighbourhood, and who are admitted on the payment of a two-guinea entrance-fee, which is expended in the purchase of agricultural books for the library. For both of these classes alike, labour and study systematically alternate, the entire number of pupils being formed into two divisions, the one devoting the morning of one day to the farm, the other to the school-room, and *vice versa*, on the morrow, both working together on the land in the afternoon, and winding up the day with two hours of study.

The chief supervision of the whole establishment devolves upon the superintendent, Thomas Kirkpatrick, M. D.; and the entire labour of the farm, including draining operations, are performed by the pupils, under the direction of a resident agriculturist."

"I am desirous to know the product, *per acre*, of the small white (or navy) bean, and the best mode of culture; and if it is perfectly convenient I would be much obliged by being informed as to the usual quantity of onions produced to the acre?"

Will some of our subscribers furnish the information.—Ed.



Ice Houses.

We are indebted for the following to the *Rural New Yorker*, and hope many of our readers will find in it a good plan or many useful hints to aid them in the construction of that important element of comfort in a country place, an ice house:

It would be useless at this time to talk of ice as a luxury, for of late years it has become almost a necessity. One pound of good hard butter is worth more, when placed on the table, than two pounds of warm, oily stuff, such as those have to content themselves with who cannot procure ice. Then there is nothing more refreshing of a warm day than a glass of ice water. It also enables us to preserve meats, &c., from becoming injured in the warmest weather, giving us in the ice house the temperature of the frozen regions, while without we are enduring an almost tropical heat. This catching and imprisoning Jack Frost, and compelling him to do us good service in hot weather, is a grand idea. If left in freedom he would leave us at the time his services were needed, and the only time when his company is particularly agreeable. To answer some inquiries as to the surest and cheapest method of keeping him with us all the summer, is our present object. Those who live in cities or large villages can generally procure ice from the dealers who save it in large quantities, in supply every day sufficient for family use, at from $3 to $10 the season, according to the quantity used. This is of course the cheapest way of obtaining ice, but farmers are compelled to save their own or do without it. As a store room for meat and other perishable provisions, the ice house is of great value to the farmer.

Building a house for preserving ice is a very simple work, and yet there are a few important facts that all should learn before commencing, or their labour may be in vain. We shall endeavour briefly and plainly to point out the most important of these. DAMP and HEAT are the two great agents of thawing, and the first endeavour must be to counteract these by every means in our power. For the first, ventilation is necessary, and for the latter, the most non-conducting material available must be used for the house. The old plan of building ice houses under ground was bad, as it was almost impossible to secure good drainage and sufficient ventilation to arrest the dampness which is sure to exist in all underground rooms or houses. Then the ground is too good a conductor of heat, and communicates its heat very readily to other bodies, much more so than even the air.

The BEST PLACE for an ice house is above ground, on a gravelly subsoil, where good, natural drainage can be had, so that the water that forms as the ice melts will pass off freely. The best material is wood, though brick is good enough where it can be obtained more readily than wood. The walls should be made double, by boarding both on the outside and inside of the frame timbers. The space between the inside and outside boards should be filled with some non-conducting material. Charcoal dust is an excellent non-conductor; dry tan-bark, or sawdust, will do very well, and if neither of these can be procured, straw will answer a very good purpose. Where the natural drainage is not first-rate, drains must be dug and filled up with stones. If left open the cold air will pass through them very freely, and its place be supplied by warm air from above. Ice keeps best in large masses, and for several reasons. In a large body there is much less surface exposed in proportion to the whole. Melting ice absorbs and renders latent a large amount of heat, so that the thawing of a part helps to preserve that which remains. Those who have built ice houses that failed to furnish a supply all the summer, will find that by simply enlarging the house, say one-third, the additional quantity of ice will be preserved, unless there is some radical defect in its construction, of which they can judge on reading the principles we have presented. A

house twelve feet each way on the ground, and eight or ten feet high, is large enough for any family, and even for two or three families, and yet it is as small as we would recommend any one to build, as the cost and trouble is but little more than for a house just large enough, and the supply is certain.

Where the drainage is good a board floor is not necessary, and we think they are not used in any of our large ice houses, though in most cases it would be best to lay down a loose floor a few inches from the surface of the ground. If a quantity of brush was first laid down and covered with straw, and the floor put over this, it would make the work complete. If a board floor is not used, there should be at least a foot or eighteen inches of straw, but a few inches on the boards will be sufficient. The ice made in the early part of the winter, and that which has been subjected to no change from freezing to thawing, is the best. It should be sawed out in square cakes as uniform in size and thickness as possible. All snow, and ice formed from half-melted snow, should be rejected, as it will not keep. After one layer is put down, the crevices should be filled with pounded ice, and this should be continued until the house is filled, when the whole will freeze into a solid mass. A few inches of straw should be placed between the walls of the house and the ice, and this should be done while the house is being filled. Then cover the whole with a foot or so of straw, and the work is done. An opening must be made in the roof for ventilation.

For the sake of convenience, the ice house should be near the dwelling, and where desirable it may be made quite ornamental at a very little expense. In this connection we give a plan of a very pretty house built by LEWIS F. ALLEN, of Buffalo. The posts of this house, it will be seen by the plan, are on the outside. This makes a very strong building. When the boards are nailed outside of the posts, they sometimes burst off, particularly when filled with any fine material, like charcoal or tan-bark. The following is Mr. A's description of the manner of building his house:

"Mark out your ground the size you require for the house; then, commencing at the one corner, dig, opposite each other, a double set of holes, one foot deep, and two and a half feet apart, on each side of the intended building, say three feet equi-distant, so that when the posts stand up they will present a double set, one and a half feet apart. Then set in your posts, which should be of oak, chestnut, or some lasting wood, and pack the earth firmly around them. If the posts are sawed, they may be 4 by 6 inches in size, set edgeways towards each other. If not sawed, they may be round sticks cut from the woods, or split from the body of a tree, quartered—but sizable, so as to appear decent—and the insides facing each other as they stand up, lined to a surface to receive the planking. Of course, when the posts are set in the ground, they are to show a square form, or skeleton of what the building is to be when completed. When this is done, square off the top of each post to a level, all around; then frame, or spike on to each line of posts a plate, say six inches wide, and stay the two plates together strongly, so as to form a double frame. Now plank, or board up closely, the *inside* of each line of posts, that the space between them shall be a fair surface. Cut out, or leave out a space for a door in the centre of the side where you want it, two and a half or three feet wide, and six and a half feet high, and board up the inner partition sides of this opening, so as to form a door-casing on each side, that the space between the two lines of posts may be a continuous box all around. Then fill up this space between the posts with moist tan-bark, or saw-dust, well packed from the ground up to the plates; and the body of the house is inclosed, sun proof, and air proof, to guard the ice.

Now lay down, inside the building, some sticks—not much matter what, so that they be level—and on them lay loose planks or boards, for a floor. Cover this floor with a coating of straw a foot thick, and it is ready to receive the ice.

For the roof, take common 3 by 4 joists, as rafters; or in place of them, poles from the woods, long enough, in a pitch of 35° from a horizontal line, to carry the roof at least four feet over the outsides of the plates, and secure the rafters well, by pins or spikes, to them. Then board over and shingle it, leaving a small aperture at the top, through which run a small pipe, say eight inches in diameter—a stove crock will do—for a ventilator. Then set in four posts, say two feet high—as in the design—throw a little four-sided, pointed cap on to the top of these posts, and the roof is done. If you want to ornament the under side of the roof, in a rude way—and we would advise it—take some pieces of 3 by 4 scantling, such as were used for the roof, if the posts are sawed stuff—if not, rough limbs of trees from the woods, to match the rough posts of the same kind, and fasten them to the posts and the under side of the roof, by way of brackets, as in the design."

VERY CHEAP ICE-HOUSE.—A subscriber of Rockford, Illinois, sends us the following plan for a cheap Ice-House:—"For the benefit of those who wish to enjoy a little cool luxury during long, hot summer days, I send you the plan of a cheap Ice-House in which I kept ice from February to October, using from it every day after warm weather commenced. Nailed up a pen, 10 by 12 feet, four feet on the ends, seven feet on the sides, leaving the gable ends open—the ground descended about one foot in twelve—filled in saw-dust about six or eight inches deep—sawed the ice as square as possible with a cross-cut saw, and packed it in, leaving a space of a foot on the sides all around. Pounded the cracks between the ice full of fine ice, filled the space around with saw-dust, stamping it down so as to make it close as possible; then covered the whole 12 or 15 inches deep with saw-dust and put on the roof. After warm weather commenced I generally went over it once a week to see if there was any melting; If there was I pounded the place full of saw-dust. This house will hold from 2½ to3½ cords. If it is allowed to freeze solid, more will be wasted than used. I have tried that plan, but if left as it is packed you can roll out a block and saw off with a hand saw as much as is wished."

A friend in Seneca Falls writes—"We have kept ice for two seasons past in our wagon-house, taking up the floor in one corner and making what you might call a large bin, about nine feet square, extending from the ground up to near the chamber floor, but not quite, leaving room for a

free circulation of air above the covering of the ice and the floor overhead.

There was slope enough to the bottom for thorough drainage, which is an important matter, in my opinion, as well as the open space above. We placed in the bottom about a foot thick of saw-dust and turner's shavings, then some loose boards for the ice to rest upon, and piled it up in in the centre, leaving a space all around of fifteen or sixteen inches between the ice and sides of the bin, until we had six two-horse loads in, when we filled in the sides with saw-dust and shavings from the planing-mills, tramped it down solid, covered the ice well on top with same material, and had nothing more to do with it until we wanted to get it for use, which was a very easy matter, having of course left a door or opening from the wagon-house into the ice-room."

[For the American Farmer.]

Game Fowls.

White Game, (*Gallus Phasianus.*)—This noble race of birds is the admiration of kings and nobles. Their admirers say they are the king among fowls. The game-cock, when in full plumage, and not mutilated for the purpose of fighting, has a fine and animated appearance. His head, which is small, is adorned with a spacious red comb and wattles. His eyes sparkle with fire, and his whole demeanor bespeaks boldness and freedom. The feathers on his neck are long and fall gracefully down on his body, which is thick, firm and compact; his tail is long and arched; his legs are robust and armed with sharp spurs, with which he defends himself and attacks his adversary. When surrounded by his females, his whole aspect is full of animation, and he admits no competitor, but, on the approach of a rival, rushes forward to instant combat and either drives him from the field or perishes in the attempt. The White Game are rare. They make a beautiful appearance on the green lawn; with their milk-white feathers and vermilion combs and silver legs they are the most beautiful of fowls. No one will doubt the excellence of this valuable bird. J. J. BOWER.

Receipts for Testing Eggs.—There is no difficulty whatever in testing eggs; they are mostly examined by a candle. Another way to tell good eggs is to put them in a pail of water, and if they are good they will lay on their sides, always; if bad, they will stand on their small end, the large end always uppermost, unless they have been shaken considerably, when they will stand either end up. Therefore, a bad egg can be told by the way it rests in water—always end up, never on its side. Any egg that lies flat is good to eat, and can be depended upon. An ordinary mode is to take them into a room moderately dark, and hold them between the eye and a candle or lamp. If the egg be good—that is, if the albumen is still unaffected—a light will shine through a reddish glow; while, if affected, it will be opaque or dark.—*Springfield Republican.*

Politics is the art of being wise for others—policy the art of being wise for one's self.

The "Weevil," or Wheat Midge.

This very formidable enemy of the wheat crop is gradually making its inroads into the fields of the Middle States, and it is important that the wheat grower become familiar with its appearance, habits, and with the remedies suggested by the experience of those in whose midst its ravages have been committed for years past. The following paper has been kindly forwarded to us by a subscriber at Frederick, Md: It was written by a Canadian wheat grower, and suggests a remedy which may prove effective as to the destruction of the midge, and at the same time make the land more capable of producing this valuable crop:

"It is now some years since the writer commenced those observations and experiments, the result of which he now offers. The observations referred to, were first commenced towards latter end of the month of June, and revealed thousands of tiny flies investing the wheat field, and fluttering from stalk to stalk as if intent on a definite object.

In a summer evening nothing can be more beautiful than an attentive observation of these insects, and to any one ignorant of the mischief they are committing, there are few sights more interesting. Like the common butterfly in the cabbage garden, the wheat midge deposits its eggs carefully in the shooting wheat, which having done, the parent fly dies, and in the course of ten days or a fortnight, the egg which she has deposited assumes life, becomes a little grub, and in due time feeds voraciously on the filling wheat.

Wheat appears peculiarly intended by nature for the food of this insect, and the period between its deposit and the cutting of the grain, seems also to be the exact time requisite to bring it to maturity; and further, it is almost evident, that were the wheat crop entirely discontinued for one year only, the insect would disappear, as there seems to be no other cereal capable of affording it an existence even for one season. This, however, would be a calamity which the country is ill able to bear, and, consequently, some other remedy must be devised. But to carry out our observations, we selected a sheaf of wheat, and prepared a space somewhat equal in extent to that occupied by the sheaf when growing, and shaking it thoroughly over the smoothed earth, we found the surface *sown* over with the diminutive worm.

We next carefully fenced in the space thus occupied, and from day to day watched the progress of the grub towards its chrysalis state, which it generally attains about the third week after it has dropped to the ground. Numbers, however, are imperfectly sealed up at the end of the twenty-eighth day, but generally after this period, according to *our* observations, the grub may be said to have fairly attained the chrysalis state, and secured itself against the rigors of winter. Early in the summer it breaks its tomb, and flutters about, a fly, to propagate its species anew. By our first year's experiments we were enabled carefully to measure the stages through which the wheat fly passed and the time occupied in each stage. Next year we pursued a further investiga-

tion, with the view of confirming former results by a renewal of our experiments.

This time we buried large numbers to the depth of several inches in the earth, and securing the spot from all annoyance, watched the result.

At the proper period, we found that the deep buried grubs had risen to the surface, and mounted as gaily on the wing as if they never had been buried—in fact, they resumed life sooner, and appeared stronger, than those which had remained exposed during the winter. Our observations would thus seem to indicate the futility of the suggestions of those who would advise the farmer to plough deep, so as to destroy this insect.

We must not here be understood as deprecating deep ploughing, on the contrary, there is nothing in connection with proper rotation and drainage more essential to successful farming; what we say is, that deep ploughing is next to useless as a mode of destroying the grub.

Having by the most careful observation ascertained the facts above stated, it was not too much to hope that we had succeeded in divesting a subject of at least a portion of the difficulty surrounding it. We assume, first, that the appearance of the wheat insect, is due to a certain transitive state of the soil, in connection with atmospheric action, as also, the wheat is its peculiar food; secondly, the period at which the fly deposits its eggs; thirdly, the adaptation of the time which wheat takes to ripen, to the wants of the grub—it being matured generally at the period when the grain is fit for cutting; fourthly, (as is generally known) that in a given time it assumes its chrysalis form, in which state it remains secure against the rigors of climate, till the following spring, when with returning heat, a new generation succeeds in the fly form—and, lastly, that it seems to thrive as well, if not better, when buried in the ground, as when left exposed upon the surface.

It was yet, however, to be ascertained how, when scattered in myriads over the mown fields, the lava could successfully be attacked and destroyed.

Careful observation had revealed to us the different stages through which the insect had passed during this year. It first appeared a fly, which busied itself in depositing its eggs in the wheat, and having fulfilled this end, it died. Those eggs being matured, the young grub appeared in motion simultaneously with the wheat assuming a milky state, but it did not begin to feed until the grain had commenced to harden; it then began its work of destruction, and as we have already said, attained its maturity when the wheat was ready for cradling. At this stage they become less tenacious, fall to the ground in large numbers, and after a time again, in turn, assume the chrysalis state. The idea which now presented itself was, at what stage could the insect be attacked with the best effect? As a fly, no power could arrest its progress, and while inhabiting the ears of wheat, in the larva form, its destruction would be equally impracticable, while as a chrysalis, it is found by repeated experiment bidding defiance to every possible means which might be devised for its destruction. Our experiments, therefore, were negative, but we ascertained the periods at which it could not be destroyed. We still resolved to try, and as before, prepared a small plot of ground, equal in size to that formerly chosen, namely, the area on which the sheaf of wheat could be grown, and as usual, taking a sheaf in which the insects abounded, we carefully shook it over the prepared plot in such a manner as to sow the smoothed surface with the mature grub—this done, and the place secured from every disturbance, we next divided the ground into two equal portions, applying our remedy to the one-half, and allowing the other to lay as in former years undisturbed.

The application consisted of quick lime, supplied in quantities sufficient to color the ground grey. While performing this operation we covered up the one-half of our plot, so as to keep it free from the effects of the lime, and this completed, we anxiously awaited the result—furnishing ourselves with facility for the detection of the most minute change.

This was a most anxious and wearisome task, and all the more so, as we felt that if no remedy could avail, then the observations and experiments of years would only be productive of chagrin and disappointment.

Day after day the grub was watched, minutely examined through a glass, and the comparison between the groups in both sections of our little plot carefully noted; and those alone who, after years of arduous endeavors, have at last obtained the object of their pursuits, can realize our satisfaction, on finding that those insects which had been subjected to the influence of lime had, at the end of a few days, shrivelled up and become almost invisible—the germ of life being evidently gone—while in that portion of the plot where the insects had been allowed to remain unmolested, they had preserved their plumpness, and gradually began to clothe themselves in a shell, which would soon render them invulnerable. We were so far satisfied, and felt assured that some degree of success had attended our labors. But resolved to test this last experiment still more, we spared no pains in boxing up the plot of ground, so as to prevent every disturbance during the winter, and so soon as the snow disappeared we removed the cover and again resumed our observations. On the half of the plot sown with lime, the lens could not detect any trace of the thousands of beings which we had deposited there in the previous autumn, while in the portion not subjected to this treatment, large numbers of the grub were perfectly visible, safe, and complete in their chrysalis form, leisurely awaiting the season when breaking its prison walls, and ascending on its tiny pinions, it would wage its destructive warfare. The satisfaction which resulted from this farther discovery was of no ordinary kind, and we felt amply repaid for the labor of years which we had devoted to this subject.

The result may be thus stated:—we found that the period from the middle of August till the latter end of September (immediately after harvest) is the time when the wheat grub can be successfully destroyed, by sowing the fields with quick lime. As soon as the wheat is removed from the field, this operation must be performed, and it can be accomplished at comparatively little outlay, either of labor or money. At any other period of the year, the application of lime with the view of destroying this insect will be useless, but at this particular period the grub lies exposed in its naked state, is tender and can be easily act-

ed upon—when once it has, however, encased itself in its little shell, no power short of burning can affect it.

Providence, in every instance, adapts means to ends. Canada is no doubt destined to be one of the greatest agricultural countries in the world; yet the fertility of her soil, and the adaptation of her climate to the growth of wheat, (more particularly Western Canada,) would at first sight seem means without an end, while wheat is only sown to be preyed upon by an insect, over which we apparently have no control. We have with a degree of confidence, resulting from careful enquiry, prescribed quick lime as an effectual agent for subduing the wheat destroyer, when applied to our fields immediately before the insect has assumed its chrysalis state, and, moreover, we are confident in its power and efficacy; and if quick lime be really the remedy destined to counteract the influence of the wheat fly, then nature has not left us unprovided for. The immense strata of limestone which abound in this section of the world, and which is so easily available, may certainly be destined by nature for various other purposes, but if in it we have the material wherewith a deep rooted plague can be removed, and our agriculture freed from the loss which it now annually sustains, we can only acknowledge the wisdom of nature's plans, and the facilities for comfort which her abundant and varied resources place within the reach of her creatures. Nor is lime a substance prejudicial to the soil—on the contrary, while we apply it for the destruction of an insect, we at the same time apply a valuable manure.

But the grubs which fall from the grain on the wheat field do not include the whole; countless numbers adhere to the grain and straw, and are thus conveyed to the barns. To dispose of these is a less difficult task, although great pains must be taken to destroy even those gathered within so small a compass.

After the wheat is threshed out, few will be found adhering to the straw, which is generally well tossed in being taken from the thrashing machine, and which is highly necessary to be preserved for provender, but the *dust* of the thrashing machine, and of the fanning mill, should be gathered up with the most scrupulous care, and either deposited in a convenient place, and well mixed with lime, or burned when that can be effected without danger.

With regard to seed wheat, (to which some of the insects may still adhere,) the heaviest should in every instance be chosen, and even this should be exposed to water, (although only a few minutes) previously to its being sown. While subjected to this process, and the wheat well stirred and allowed to settle a few minutes, the insect will be found floating in large numbers on the surface, like small atoms of dust, and can easily be removed and destroyed, after which the wheat being allowed some time to dry, may be sown."

LARGEST FLOWER IN THE WORLD.—There is a plant in the island of Sumatra, the circumference of whose fully expanded flower is *nine feet;* its nectarium is calculated to hold nine pints; the pistils are as large as a cow's horns, and the whole weight of the blossom is computed to be fifteen pounds.

Orchard Grass—A Difference of Opinion.

The Georgia *Journal & Messenger* says:

We here take occasion to differ from Dr. Lee in regard to the virtues of the orchard grass. It will do where none other better will grow. But in Tennessee, both the timothy and red-top are preferred, we believe. It is too coarse for either hay or pasture. Still, we would like to have it tried.

We copy the above to say that we have never recommended orchard grass to the exclusion of all others. The fact is generally known that the subject of grasses, and the production of superior live stock, have received more attention in England than in any other country. The farmers of Great Britain have long sought after and obtained the best grasses grown in Europe; and they have made the whole civilized world pay a willing tribute to their judgement in this matter, by purchasing at exceedingly high prices their superior breeding animals, improved mainly because well kept on such grasses as are best adapted to the natural requirements of neat cattle, sheep, and other farm stock. Their wonderful success in producing the very best domestic animals in the world, is due to their skill in grass-culture, aided largely by the natural humidity of the climate of the British Islands.

They have been experimenting for a hundred years, and finally, the Royal Agricultural Society employed one of the best analysts of the age, Prof. Way, to analyse thirty-four species of their best grasses. He found that orchard grass contains more of the organized substances which form the flesh of animals than any one of the other thirty-three.

To prevent orchard grass growing in tufts and coarse, the ground must be thickly seeded. This, we dare say, was not done by those farmers of Tennessee who failed to obtain satisfactory results. Timothy and other grasses, as well as clover, ought to be sown with orchard grass, cultivated for meadow. But where one is just beginning a system of grass culture, and desires to raise seed, each species and variety had better be grown separate from all others, to obtain pure, unmixed seed. It must not be assumed that every man who has not been reared to the business of grass-culture can master this agricultural art in a day, or in a year. There is not a county in the United States where this art approaches perfection. Farmers do not study their calling sufficiently as an intellectual pursuit, but too often jump far to reach their conclusions. We must learn to reason together—to investigate closely the true value of every agricultural plant presented for examination and trial. Many a farmer fails to raise good crops of corn, not from any defect in the plant, but in the culture, or in the soil. We do not propose to ride as a hobby grass-culture at the South, or elsewhere. We have investigated the subject twelve years, and hope yet to learn much more in the next twelve. Nature greatly favors the growth of nutritious grasses; and our faith is pretty strong in the wisdom of Nature, and in that of her Author.—*Field and Fireside.*

Thickly sown and closely grazed, the Orchard Grass, our Southern friends may be sure, is a first rate pasture grass and very good for hay.—Ed.

A CLYDESDALE STALLION.
(Drawn on wood by H. W. Herbert.)

The above engraving represents a stallion, of a famous breed of horses, generally used for purposes, almost purely, agricultural. This breed—the Clydesdale—derives its name from the valley of the river Clyde, in Scotland, where it is found in greatest perfection. The Clydesdale horse is very strong and hardy, has a small head; he has a longer neck than the Suffolk Punch, and a lighter carcass. His great size however does not make him clumsy. The (London) Farmer's Magazine, speaking of this breed, says: "It is really a treat, and one altogether peculiar to the country, to see half-a-dozen or so of these grand Clyde draught horses trotting as light and pleasant as ponies. Some of them have quite grand action." We are indebted for the above cut to Messrs. A. O. Moore & Co., the publishers of "Hints to Horse-Keepers," by H. W. Herbert.

The American Farmer.

Baltimore, October 1, 1859.

TERMS OF THE AMERICAN FARMER.

Per Annum, $1 in advance—6 copies for $5—13 copies for $10—30 copies for $20.

ADVERTISEMENTS.—For 1 square of 8 lines, for each insertion, $1—1 square per annum, $10—larger advertisements in proportion—for a page, $100 per annum; a single insertion, $15, and $12 50 for each subsequent insertion, not exceeding five—payable quarterly in advance.

N. B. WORTHINGTON,
Publisher of the "American Farmer,"
CARROLL HALL, S. E. Corner Baltimore and Calvert streets, Baltimore.

Maryland State Agricultural Society.

We take occasion again to call the attention of our readers to the Annual Exhibition of our State Society. The farmers of our own and neighbouring States should observe that the time of the exhibition is a week later than for some years past, and will on that account be much better accommodated to their wheat seeding.

To strangers, especially those interested in fine stock, the Maryland exhibitions must be always attractive. Our herds of Devon, Alderney, Short Horn, Ayrshire and Herefords are now famous throughout the country, and are just now reaping fresh laurels in the great West. The show of Sheep and Swine is always good, and that of Horses especially attractive.

But we trust that the exhibition of useful Implements and the productions of Farm and Household Industry, will prove even more useful, if not so generally attractive.

The beautiful grounds of the Frederick county Society have been enlarged and adapted to the use of the State Society, and our friends there, we are sure, will spare no pains necessary for the pleasure and comfort of visitors. It is quite well worth a trip from any portion of the State to see the beautiful country with which Frederick is surrounded.

The Railroad Company, we learn, will issue commutation tickets for the accommodation of visitors, carry stock for exhibition free of charge, and make every possible arrangement for the convenience of travel to and from the Fair. We trust to have a full show of exhibitors and spectators.

We have received a Catalogue of Fruits and Ornamental Trees, &c. at the Hopewell Nurseries of Henry R. Robey, near Fredericksburg, Va.

American Guano.

In our monthly supplement of 15th September, in publishing the analysis of the "American Guano," by Dr. Morfit, we expressed the wish that it might have the "opportunity of a fair trial in comparison with other fertilisers, on the fall seeding." Of course we meant no more than we said. There are very many who could give it "a fair trial" at little cost, and we only wished such a trial preparatory to its introduction should it be found to answer expectation.

On examining again Dr. Morfit's article, we are fearful lest the reader who does not read it carefully may attach a higher value to the figures exhibited than they in fact indicate. The article itself can mislead no one who will give it the attention such a paper merits; but from abundant caution we wish to call the reader's attention to one or two points, and with reference especially to the price at which this guano is offered for sale.

Dr. Morfit's analysis doubtless expresses the true character of the cargo he analyzed, that of the "Henry Brigham," which is now for sale in Baltimore. The lumps, he tells us, constitute 36½ *per cent.* of the entire cargo, and their phosphoric acid is equivalent to 85.84 per cent. of bone phosphate of lime, while the rest of the cargo, or 63½ per cent. of it, contains only the equivalent of 21.10 per cent. of this compound. Let us then state the question arithmetically for a hundred tons of the cargo:

36½ tons contains of bone-phosphate of lime		31.33 tons
and 63½ tons	" "	13.40 "
so that 100 tons	" "	44.73 "

That is, the true content of this cargo is 44.73 *per cent.* of bone phosphate of lime. Calculating the sulphate of lime in the same manner, we find its average per centage to be 44.81—now calculating "AA" Mexican Guano at $20 a ton, and ground plaster at $7, we find the following value of the Brigham's cargo:

Phosphate of Lime	$15.98
Sulphate of Lime	3.14
Total value	$19.12

This then appears to be in fact the money value of the Brigham's cargo, estimating simply by the contents of Phosphate and Sulphate of Lime. The peculiar combination of these gives it additional value no doubt as suggested in the article of Dr. Morfit, yet we do not, we confess, see by what process of valuation it can reach the price of $40 per ton, at which it is selling. If it has really, as is maintained, a value which the analysis does not indicate, we hope it will be made apparent in the trials now being made of it. We

should certainly wait for a further development of its quality before paying for it the price now asked.

On another page we give an examination by Dr. Piggot of another cargo, not in this market, which it will be seen is of much lower value than that for sale here. It is a characteristic of this Guano from Baker and Jarvis Islands that there has been very great difference in the value of different cargoes. Whatever may be ascertained therefore and said, as to the value of any particular cargo, may be entirely inapplicable to what is termed generally "American Guano."

The Crop of Wheat and Prices.

We see nothing to change the opinion we expressed in August as to the shortness of the crop of wheat. We had direct and reliable information as to Maryland and the surrounding States of the deficiency exhibited on threshing out the crop. The same cause which operated here seems to have affected the crop in all parts of the country. The Cincinnati *Price-Current*, one of the most reliable sources of information, says, at a late date, "we notice that the papers which have been exaggerating the wheat crop so persistently, are beginning to find out that matters are about as we stated several times, the past five weeks. The crop is a short one, beyond a doubt, but not as short as it was last year."

The Chicago *Express* says, "the receipts of wheat, though liberal and increasing regularly to the present time since the harvest, are still behind the expectations generally formed at the first of August and considerably less than at the same time in 1857, as appears from the following statement of receipts from the 1st of August for three years:

	1857.	1858.	1859.
1st week,	40,617 bu.	54,745 bu.	45,309 bu.
2d "	94,850	101,057	148,855
3d "	192,876	208,374	193,407
4th "	516,469	404,723	421,745
5th "	866,502	355,190	520,588
Total,	1,711,823	1,124,149	1,329,958."

From these figures it will appear that the receipts only exceed those of the wretched crop of last year some 200,000 bushels, while they are short of the receipts for same period in 1857 some 400,000 bushels—and it will be remembered that the crop of 1857 was by no means a full one.

This deficiency as compared with receipts for the same period in '57 are to be attributed in part no doubt to difference in price. The average price of the month of August, at Chicago, was, in 1857, $1.01½; in 1858, 0.80, and in 1859, 0.71. While this accounts in a measure for the deficiency in receipts between the two seasons, it shows a strong conviction on the part of the farmers that the low prices of August are due to the great exaggeration of the yield of this year's crop.

While the receipts of wheat for the five weeks as above at Chicago, exceed those of last year 200,000 bushels, the falling off in receipts of grain of all sorts for the same time was 1,000,000 of bushels, or 2,770,800 against 3,844,456 bushels last year,—showing the great deficiency of the corn crop of last year and the short supply of old grain of all sorts on hand at harvest.

It is to be considered too that every branch of business is more prosperous than during last year and people more able to buy and more willing to consume freely.

There is no foreign demand, nor is there likely to be. The crops of Europe are no doubt good on the whole. But the population of this country are able to eat all we have made this year and to pay a price for it which we think it has not yet reached. We look therefore with reason for some improvement in price during the fall, and more by the spring.

Virginia Fairs.

The State Central Society of Virginia will hold its Fair on its new and handsome grounds near Richmond, on the 25th to 29th October, inclusive.

The Virginia State Society, associated with the Union Society of Virginia and North Carolina, will hold a Fair on the grounds belonging to the latter, near Petersburg, on the 1st to 4th of November, inclusive.

The Seaboard Society, at Norfolk, will hold its annual Fair on the 8th to 11th November, inclusive.

The Lynchburg Society will hold its Fair, commencing October 18th.

The South-western Society, at Wytheville, will hold its Fair, beginning on the 12th October.

The Rappahannock River Agricultural and Mechanical Society will hold their Fair and Cattle Show on the grounds of the Society, in Fredericksburg, on the 8th to 10th November, inclusive.

The Valley Agricultural Society will hold its fourth annual Show and Fair at Winchester, commencing October 18th.

THE MONTGOMERY COUNTY (MD.) AGRICULTURAL FAIR.—The Agr. Society of Montgomery county held its thirteenth Annual Fair on the 8th and 9th of September, at their beautiful grounds near Rockville. We learn that the exhibition was a very gratifying and successful one.

The annual address was delivered by Joseph H. Bradley, Esq.

The Price of Guano.

The price of Peruvian Guano during the season illustrates the importance to the agricultural interests of Maryland, and to all who deal with Baltimore, of having a direct importation to this port of this valuable article of trade. We say nothing of the value of this trade to the city of Baltimore, that is a matter which directly concerns those who have an interest here. But every ton which goes to New York first, and has to be transported here, is not only a tax upon the merchant here of one dollar, but an additional tax upon the farmer of one dollar per ton. Last year, it will be remembered, a restriction existed as to sales outside of Maryland of Baltimore Guano, and Guano was brought here and sold at $63—now the outside price is $62 the long ton for small lots of better Guano.

As regards the monopoly, of which much has been said, and the price at which it is said those who purchased the supply here from the agency meant to sell, whether an advance of one, two, three, or four dollars, it is a matter which does not concern us. What we have maintained throughout is that there is and has been no such monopoly as could interfere with that competition in trade which always regulates prices.—This is now very apparent from the fact that there has never been more eager competition. To attribute this competition to a desire on the part of one merchant to protect the agricultural community against another is absurd. Farmers expect and believe *all* merchants will get what the circumstances of the market will allow for their goods; all they ask is fair play for the operation of the laws of trade.

We have seen with much pleasure the following in the St. Mary's county "Beacon" as to the success of one of the *American Farmer's* best friends in a new and interesting enterprise. May he have always, and only, such wine as "maketh glad the heart of man":

We were present on Thursday last at "Bloomsbury," the residence of Francis J. Stone, Esq., on the occasion of a somewhat novel celebration. Mr. Stone has a vine-yard established on his estate for some years; and as the present is the first year his vines have born, he called his friends and neighbors together to celebrate the occasion in a becoming manner. Many availed themselves of the invitation, and all present, we are confident, were delighted with their visit. Mr. Stone expects to realize over a hundred gallons of wine from this year's vintage. He has at present fifteen hundred bearing vines, and this number will be largely augmented another year. The grape he plants is of the Catawba variety.

The Manipulated Guanos.

It will be observed that in the letter of Mr. Willoughby Newton, in Mr. Kettlewell's advertisement, he speaks of having visited his works and witnessed the manipulating process, and is satisfied, he says, "not only of the thoroughness but of the entire fairness of the operation."

We are glad to see this, and hope that farmers will avail themselves of any opportunity they may have to do the same thing. We think it right we should say, that we have been frequently invited by Mr. Kettlewell, Mr. Robinson and Mr. Reese to visit their establishments. Their arrangements are all made at large expense and with a view to doing their work in the most thorough manner. It is not merely reducing the materials and mixing them, but the most thorough working together of the ingredients through the machinery, in exact proportions, which constitutes what is known to the community as "Manipulated Guano." The purpose of such intimate, thorough combination being, that the ammonia of the Peruvian may produce a direct action upon the phosphatic guano and make its valuable qualities at once available. So important is this action of ammoniacal manures, that the great German chemist, Liebig, ascribes their whole value to their effect in reducing and making available the mineral constituents of the soil.

The manner in which the manipulated guanos are prepared is therefore a matter of importance. The advances charged on the cost of materials is large, yet it is very possible that the farmer gets an article worth as much to him as the Peruvian, for which he pays a higher price, provided the admixture has been made in a manner to secure all the advantage which the theory indicates.

THE "OLD" SPIRIT OF THE TIMES.—We deem it an act of editorial courtesy to our *ancient* friend, the "*Old*" *Spirit of the Times*, and one of the oldest weekly papers in the Union, to say, that it is not identified or involved in any way in the controversy recently brought before the public through "*Porter's Spirit*," and "*Wilkes' Spirit of the Times*," a mistake that is not altogether unavoidable, the names of the papers mentioned being nearly the same. "The 'Old' Spirit," as it is familiarly termed by its friends and subscribers, still flourishes, the leading journal of the Turf and of the Field, and we are happy to hear that its subscription list was never larger than at present, or its editors and publishers more prosperous.

Diet cures more than the doctors.

In connection with the subject of the price of Guano, and the supply on hand, we copy from the *American Farmer* of 1st *August*, the following editorial:

"PERUVIAN GUANO.—We understand that there is a very full supply of Peruvian Guano on hand, but there is no abatement of price. Freights are some ten to twelve dollars a ton, and the whole cost delivered into the agents' warehouses here does not probably exceed $25 per ton. Delivered out of said warehouses to the farmer, it is worth, according to these gentlemen, $62.

"We are *not willing to offer advice* in the premises, but there is, *without doubt*, an *ample* supply on hand for fall use, and freights upon it *must be paid*. If farmers by general consent will *postpone* making purchases *till a late period*, the *necessity* of meeting their *bank* engagements may *force* the agency to offer an inducement to buyers *by a reduction of price*. And if they would take one step further, and *refuse to buy at all at any price* for one year, it would be such a *lesson to these people* as *would last them* the remainder of their days."

For giving pretty much the same advice, in our "*Rural*" of the 15th August, the editor of the *Farmer* not only tacks round, in his September paper, and evidently forgetting all that he had said *but a few days before*, imputes to us "*selfishness*," and with conniving at a "*trick*" or a *delusion*" upon the farming interest, for exposing the double monopoly, which is a far exceeding cause to what he had already urged, why the farmer should follow the advice which he himself had given but a few days before. The prompting motives of such conduct we leave to others to judge. The *italics* in the above are ours, with the exception of the advice to "*refuse to buy at all at any price*." We ask the reader who may have the facility to do so, to compare the above extract with the remarks from the same source in the September No. of the "Farmer."

The above was written for the *Rural Register* by Mr. Sands, a manufacturer of, and a dealer in "Sands' Manipulated Guano." It is evident he was pleased with the tendency of that innocent little article of our August number, which he quotes so affectionately, and dresses off in italics, to give the more force and effect to its several points of interest. Our article of September—which he does not copy, and commends to the attention of those only "who have the facility" of getting hold of it—he does not like. Its tendency is contrary to that of August. He was "deluded" into the belief that he would find in us an ally, and has been disappointed. He expected "bread," and got only "a stone," and is evidently indignant at "such conduct."

If the reader has the capacity of an ordinary grown-up man, or good sized boy, and *will* compare our August and September numbers, and not take for granted there is inconsistency because Mr. Sands thinks so, he will find, that however different the effect of these articles might be as regards the sale of Guano, there is no "tacking," no "forgetting," nor one word in the September article inconsistent with that of the August number.

"To refuse to buy at all at any price for one year" is a true and efficient remedy as against the Peruvian Government, and one far more dignified and worthy of the agricultural community than a constant carping at, and dogging "the monopoly." It was of course only a suggestion, which could be made practicable by general and concerted action, and we had no idea would or could effect anything as regards the fall sales.

When our first article was written, about the 20th of July, there *was* an ample supply of Guano on hand, and the suggestion at that time not to buy early was a safe one. Guano has not gone up—it might have gone down. Before our second article was written there was *not* a large supply as compared with last year's sales, on account of an unprecedented and therefore unexpected purchase in Baltimore of a New York Guano broker, whose Southern customers (dealers) demanded Baltimore Guano, when heretofore they had been satisfied with that from New York. This New York purchase was one-third of the whole amount on hand when our first article was written. Other sales to Virginia dealers reduced the supply for sale in Baltimore more than one-half. Therefore, when our article for September was written, we advised our readers to make no unnecessary delay in purchasing. It was then quite certain there would be no reduction of price, and delay to a late period might expose them to the necessity of buying the New York Guano which others were refusing. Moreover, the suggestion as to holding back for a lower price, while applicable to the Peruvian agency, with a large supply on hand, and selling at a large profit, would be entirely unjust as regards regular dealers of our own, who have bought at full price from the agency and are making but a small profit—not so much as is realised on "Sands' Excelsior."

The reader will see, therefore, no tacking, no forgetting, no inconsistency, but only different advice given under entirely different circumstances.

Mr. Sands repeats that we have charged him "with conniving at a 'trick' or a 'delusion' upon the farming interests." We have not charged him with a "trick," neither have we charged him with "a '*delusion*' on the farming interests." In this connection we wish the reader to know (what Mr. Sands does know) that in the origin

of the monopoly report, besides Mr. Sands' publication there was one in the Baltimore *Clipper*, two in the *Sun*, and one in the *American*—(the latter corroborating our own statement of facts in every particular)—and much out of door talk. In our September article, it will be observed, we call it "a rumour," and make no allusion to Mr. Sands' article except as it was associated in our mind with other publications and the general report, nor did we then believe that it originated with Mr. Sands. There was nothing in our article, therefore, that he need take to himself. But suppose it had been directly aimed at him, we said it was "just possible" that it originated in the rivalry of trade, and thought that it was in fact "a trick or a delusion." Here was a pretty fair alternative, we think. It was just possible he was deluded. And is such a thing so impossible that the bare suggestion shocks him?

We are at some pains on this account, because it is quite apparent Mr. Sands has some object in making it appear that we have made an attack upon him, when we have only presumed to differ from him in opinion. Our business was with the readers of *The Farmer*, and because we have seen this Guano transaction in a different light from that which blesses his vision, he charges us with "lending" our pages, with "justifying" the monopoly, and aiding the iniquitous imposition. Mr. Sands is tender enough at the bare hint of improper motives as regards himself; it does not appear by his onslaught upon merchants here, of quite as much character as himself, or by this uncalled-for assault upon us, that he is careful to respect the motives of others.

☞The sixth Annual Exhibition of the York Co. Agricultural Society will be held at York, Pa., on the 4th to 7th October. This is one of the most spirited and prosperous societies of which we have any knowledge. They have fine grounds, offer liberal premiums, and persons out of the county are invited to compete. The railroad will carry articles free of charge and furnish tickets at reduced rates.

☞Clement Hill, Esq., of Prince George's county, will have his annual sale of stock reared on his estate, near Washington, on the 4th of October. The Washington *Star* says very justly of Mr. Hill, that he is doing as much for the future of the country in the way of breeding, improving and diffusing fine stock, as any other gentleman within its limits.

A large manure heap, a full granary.

Acknowledgments.

We acknowledge the receipt from Richard Peters, Esq., of Atlanta, Ga., of a pamphlet containing report, &c. on the Cashmere Goats. See his advertisement.

Catalogue of Fruit Trees, &c. from the Cedar Glen Nurseries of D. M. Reichard, Washington, D. C.

Catalogue of the Gloaming Nursery, Clarksville, Habersham Co., Ga., by Jarvis Van Buren.

Descriptive Catalogue of Fruit and Ornamental Plants, &c. of the Cumberland Nurseries, Carlisle, Pa., by D. Miller, Jr.

Catalogue of Fruit and Ornamental Trees, Vines, &c. at the Nurseries of Isaac Pullen, Hightstown, N. J.

Descriptive Catalogues of the Syracuse Nurseries of Smith & Hanchett, Syracuse, N. Y.

Trade Circular of C. Reagles & Son, of the Union Nurseries, Schenectady, N. Y.

Catalogue of Fruit Trees, Grape Vines, Strawberries, &c. at the Fruitland Nurseries, Augusta, Ga., of P. J. Berckmans & Co.

A. Frost & Co's Descriptive Catalogues of the Genesee Valley Nurseries, Rochester, N. Y.

Premium List of the State Agricultural Society of South Carolina, for their fourth annual Fair, to be held at Columbia on the 8th to 11th of November.

Premium List of the sixth annual Cattle Show and Fair of the Connecticut State Agricultural Society, at New Haven, on the 11th to 14th of October.

Premium List of the great Agricultural Fair of the American Institute, and Horticultural Exhibition of the N. York Horticultural Society, on 21st to 23d of September.

List of Premiums of the twenty-first annual Fair of the American Institute, at Palace Garden, commencing 21st of September and ending 28th of October.

List of Premiums of the fifth annual Exhibition of New Jersey State Agricultural Society, to be held in the city of Elizabeth, on the 13th to 16th of September.

We are indebted to B. P. Johnson, Esq., Secretary of N. York State Agricultural Society, for a pamphlet entitled "New York State Agricultural College Farm. Its characteristics as indicated by its general botany, by Prof. Wm. H. Brewer."

CHARLES COUNTY AGRICULTURAL SOCIETY.—The Charles County (Md.) Agr. Society will hold its annual Exhibition at Port Tobacco, on the 9th, 10th and 11th of November.

The President of the U. S. Agricultural Society.

We have had the pleasure of a visit from Gen. Tench Tilghman, President of the United States Agricultural Society, on his return from the Exhibition at Chicago. The General is greatly gratified as he may well be at the ample success of this great National Fair, and we are much pleased to find him looking none the worse for the very arduous duties which he has passed through.

The indomitable energy and determination, and hearty, intelligent zeal which Gen. Tilghman carries with him into whatever he undertakes, has contributed very greatly, no doubt, to the success of the Exhibition. Maryland, besides the inferior triumphs recorded in another place, has the higher honor of furnishing the United States Society with its President.

We know at the same time that the President was seconded by a most efficient Executive Committee, and other officers, and that many leading gentlemen lent their utmost aid to make the Exhibition the most successful ever held by the Society. In a financial point of view, the Exhibition has proved gratifying to the friends of the Society, and will leave it handsomely in funds after paying all expenses.

Royal Ag. Society of England.

We find in the Chicago *Democrat* the following letter from the Baron Walsingham, President of the Royal Agricultural Society of England, who was invited to attend the U. S. National Exhibition. "It is to be regretted," says the *Democrat*, "that the central society of the mother country could not have been officially represented here. We are gratified to learn that a good portion of the premium grain and seed will be sent to the English Society for distribution:"

SIR: I beg to acknowledge the receipt of your letter containing an invitation to the Exhibition of the United States Agricultural Society to take place at Chicago. I regret much that your letter having only just reached me, the great distance will prevent my being present at a meeting in which I should feel the greatest interest.

I shall report your obliging communication to the Council of the Royal Agricultural Society of England, and feel certain they will feel as I do personally, much gratified by the honor you have done them in inviting their President to your exhibition.

I have the honor to be, sir, your obliged and obedient servant,

WALSINGHAM,
President of R. A. S. of England.

To the Hon. Gen. TENCH TILGHMAN, President of the U. S. Agricultural Society, Chicago.

☞ We had the pleasure recently of a short visit to the nurseries of Messrs. Evans & Luitweiler, near York, Pa. They are under the particular charge of the latter, who, from the condition in which we found matters, seems to have acquired a thorough practical knowledge of his important business at the great establishment of Elwanger & Barry, near Rochester, where he spent some years. The proprietors are about to extend their field of operations, and with the many valuable nurseries springing up around us, the York nurseries will soon be in condition to contribute largely to the supply of the rapidly growing demand for trees of the best sorts.

Good Cider.

The following *Recipe* for improving Cider we copied last season from our worthy contemporary, the *Boston Cultivator*. It is worthy of notice again. The suggestion of the *Sulphite of Lime* for stopping fermentation is applicable as well to wine as cider. Let it be noted that *Sulphite* is a very different thing from *Sulphate* of Lime—the latter being the common ground plaster or gypsum. The applicability of the *Sulphite* to the purpose of stopping the fermentation is in fact due to that which constitutes its difference chemically from the Sulphate. It is precisely because *it is not* Sulphate that it answers the purpose of checking fermentation.

Recipe for Improving Cider.—Let the new cider from sour apples (sound and selected fruit is to be preferred) ferment from one week to three weeks, as the weather is warm or cool. When it has attained to lively fermentation, add to each gallon, according to its acidity, from half a pound to two pounds of white crushed sugar, and let the whole ferment until it possesses precisely the taste which it is desired should be permanent.

In this condition pour out a quart of the cider, and add for each gallon, one quarter of an ounce of Sulphite of Lime, known as an article of manufacture under the name of *Anti-Chloride of Lime*. Stir the powder and cider until intimately mixed, and return the emulsion to the fermenting liquid. Agitate briskly and thoroughly for a few moments and then let the cider settle. The fermentation will cease at once.

When, after a few days, the cider has become clear, draw off and bottle carefully, or remove the sediment and return to the original vessel. If loosely corked, or kept in a barrel on draft, it will retain its taste as a still cider. If preserved in bottles carefully corked, which is better, it will become a sparkling cider and may be kept indefinitely long.

THE FAWKES STEAM PLOUGH.—The trial of the Fawkes Steam Plough at Chicago was, we learn, a very satisfactory one. It received the award of the gold medal of the U. S. Agricultural Society and $1,500 from the committee of the Illinois Society.

The Corn and Flour Exchange.

OFFICE OF THE AMERICAN FARMER,
Baltimore, September 15.

WM. CRICHTON, Esq.,
President of the Corn Exchange:

DEAR SIR: An esteemed correspondent in Delaware writes me as follows:

"Will you, either by letter or through *The Farmer*, enlighten me or your readers regarding the rules and regulations of the *Corn Exchange* in your city. I do not ask for a regular list of all the items, but those referring to any violations a *stranger* might be apt to make.

"My reasons for asking this, is: A gentleman placed his hand on two or three samples of the Oats, a few days since, and priced them, while the sales were going on there, and was called to account by some one in the Exchange for so doing. The violator was a large and prominent farmer on the Eastern Shore, and sells his grain in the Baltimore market, and having his oats still on hand, was desirous to ascertain what they would bring, being then on his way to his farm.

"While on the Eastern Shore, he interrogated some of the best farmers regarding the rules of the Exchange, and not one of them knew anything about the matter.

"A man may handle his own grain and be expelled the place for so doing."

Our friend, in conclusion, makes the following enquiries:

"1. Are strangers permitted to enter the Exchange during business hours, or at any other time?

"2. Are they permitted to ask the price of grain?

"3. If the above is permissable, is it positively contrary to their rules to handle the samples?"

Agreeing with this gentleman that farmers visiting the city should enjoy the largest liberty consistent with the proper dispatch of business, in visiting an institution so immediately connected with their interests, and not being able to answer these questions with certainty, I beg the favor of you to give me as briefly as you can such information as to your regulations as will enable them to do so without the annoyance and mortification of being rebuked for a violation of your rules.

Very respectfully, your obedient servant,
N. B. WORTHINGTON.

BALTIMORE, September 17, 1859.

N. B. WORTHINGTON, Esq.,
Editor American Farmer:

DEAR SIR: Your esteemed note of the 15th instant is before me. It affords me much pleasure to reply to the inquiries of your respected correspondent in Delaware, regarding the rules and regulations of the "BALTIMORE CORN AND FLOUR EXCHANGE," and I embrace the opportunity thus offered, the more cheerfully, because of the erroneous impression entertained by many of the agricultural community respecting the business character and purpose of the Corn Exchange; which, I trust, a better acquaintance with the regulations governing members as well as visitors, and the business of the Exchange, will tend to dispel.

To the first interrogatory—"Are strangers permitted to enter the 'Corn Exchange' during business hours, or at any other time?" I reply, most assuredly, as the numerous strangers to be seen on the floor every morning abundantly testifies, subject, of course, to such rules as have been adopted for the proper government of such institution, and which are conspicuously posted on the walls in large printed placards; after business hours the Exchange is closed.

"2. Are they permitted to ask the prices of grain?" For the members to decline answering such an inquiry, or any of so respectful a character, would be a simple violation of that courtesy and common politeness due to every stranger.

"3. If the above is permissable, is it positively contrary to the rules to handle the samples?"—IT IS—and one of the rules most conspicuous on the walls, as above noticed, respectfully requests "parties not purchasing grain, not to handle the samples on exhibition." The frequent handling of samples of grain during the time they are on exhibition, injures the appearance and character of the sample, and cleans it as if by "fanning." The caps, chaff, cob, straw, and other foreign matter in wheat, corn, or oats, is thus often taken from the samples—sometimes thoughtlessly picked out and thrown away by parties unaccustomed to buying by sample, thus improving the character of the sample and rendering the cargo or bulk, which the sample when first brought on '*Change* correctly represented, subject to rejection by the purchaser from not being equal to sample—a fruitful cause of complaint by farmers, and, I regret to say, attributed by them often to other and less honorable motives than the real one.

The reason of the strict enforcement of this rule must be obvious to your correspondent as it is to all sellers and buyers of grain.

Another prominent rule of the Exchange positively prohibits SMOKING on the floor; yet this is often violated (inadvertently, doubtless,) by strangers, to the annoyance of the three or four hundred people daily assembled in the rooms.

The SECRETARY of the Exchange is entrusted with the proper and courteous enforcement of the rules and regulations; his diffidence and politeness in directing members, and especially strangers, to their observance is proverbial, and I am loath to believe that the most fastidious could construe his request to observe the placards on the walls into a "rebuke." Your sensitive correspondent need not to have been in dread of summary process being executed upon him; nothing but repeated or intentional violation of the rules, or conduct unbecoming a gentleman, will "expel" visitors from the rooms.

Members have the privilege at all times of introducing their friends, and to give such the proper "liberty" of the floor, with free access to the papers and price currents on file. The names of such strangers, together with the name of the member so introducing them, should be entered on the slate provided for that purpose, and with proper observance of the rules visitors will *always* find that welcome which they, as strangers and agriculturists, are entitled to.

Very respectfully, your obedient servant,
WM. CRICHTON, *President.*

The new Custom House at Chicago will cost $450,000.

The Cranberry.

In a late number we promised to give directions in time for fall planting, for the guidance of those who might be disposed to make an experiment in the cranberry culture. That this is a most valuable fruit cannot be doubted, and the lowest estimates made of the crop per acre would make it pay very handsomely. One hundred bushels to the acre at $3.50 and $4 per bushel for a crop, that, after the first few years, the books tell us, will take care of itself, is profitable work, but when it comes to four hundred bushels it is very tempting. We would have no one indulge in sanguine anticipations of a crop so very profitable. Yet we do believe that with the care given to other valuable fruits it may be made a source of very considerable profit. We know that they are grown of very superior quality in this latitude, and we only want proper information and experience in their management. The following we copy from a circular of Mr. Bates, an experienced cultivator in Massachusetts. Mr. Bates is confident that the cranberry may be cultivated to advantage in ground sufficiently dry for corn. Of this we have serious doubts, yet it may be worth the trial. Pure sand and water seem to possess all the essentials for the largest crop of cranberries. We do not doubt that the best position is on a drained bog or marsh where the water may be always within twelve inches of the surface, and where the ground may be entirely flooded when desired. The surface of the bog should be taken off to the depth of at least six inches and pure beach sand, if it can be got, put on, in which no other plant will grow. This is a very expensive operation, but is perhaps the most economical in the end. The vine grows well and bears most abundantly on such a preparation, and it is free from grass, an important consideration.

This delicious fruit is coming into such general use, and is becoming so important an article of export, and so much interest is now taken in its cultivation, that I propose giving a concise account of the same, and its general history.

The common American Cranberry (*oxycocus macrocarpus*) is found growing in a wild state in all swampy soils, in the Eastern, Middle and Western States. The first account we have of the cultivation of this fruit, is by the late Sir Joseph Banks, who, in 1813, produced from a bed 18 feet square 3½ Winchester bushels; being at the rate of 460 bushels to the acre. Capt. Henry Hall, of Mass., has cultivated this fruit for the last twenty years. His method is to spread on his swampy ground a quantity of sand—this is to kill the grass; but where sand is not at hand, gravel will answer the same purpose. He then digs holes four feet apart each way, and puts in the holes sods of Cranberry plants about one foot square.

As this plant naturally grows in a very wet soil, it is generally supposed it will not thrive in a dry soil; but this idea is errroneous. Mr. S. Bates, of Bellingham, Mass., has cultivated the Cranberry on a dry soil for several years with the utmost success. His method is to plow the land—spread on a quantity of swamp muck, and after harrowing the soil thoroughly, set out the plants in drills twenty inches apart, hoeing them the first season. After this no cultivation is needed. By both the above methods the plant will cover the ground in three years.

From my own knowledge of the Cranberry for the last thirty years, should I design commencing the cultivation of this fruit on an extensive scale, I would try it on swampy and dry soils. I would drain the swampy soil, plow it as early as possible in the spring, and set out the plants on the plan of Mr. Bates.

To show the rapidity with which Cranberry-plants increase, I will add this statement from an English work on fruits: An English gentleman had only a few plants, these he cut in small pieces or cuttings, and set them out in a green-house. In the spring he prepared some swampy ground by spading it 12 inches deep. In a bed 150 feet long and 4 wide, he set out seventy-five cuttings two feet apart in the drill, and yet in three years the plants completely covered the ground.

Prepare your soil the same as for sowing grain, by plowing, harrowing and making your soil even—then mark it out in drills, 18 or 20 inches apart, putting the plants in the drills, 5 or 6 inches apart—hoe them slightly at first, till the roots become clinched, and afterwards no other cultivation is needed. The plants may be expected to run together and cover the whole soil in two or three years. The Cranberry grown by cultivation usually yields from 150 to 400 bushels per acre; its fruit is two or three times as large as the wild fruit, and of a beautiful flavor; it readily keeps sound from the harvest time of it to the time of harvest again. The fruit is usually gathered in September. It is gathered with wire-teeth rakes, made for the purpose. One man will generally gather from 30 to 40 bushels per day, with the aid of a boy to pick up the scattering fruit.

The U. S. Agricultural Society.

The Society's Exhibition at Chicago—A Great Success—One Thousand Dollars in Premiums taken by Maryland Exhibitors of Stock.

It gives us great pleasure to record the success of the Maryland herds at the great Exhibition at Chicago. When it remembered that Messrs. McHenry and Merryman are the only Maryland Exhibitors, and the Representatives only of the large number of very superior herds of Maryland, it may well be considered a great triumph. The following was communicated to the Baltimore *Daily Exchange:*

CHICAGO, September 15, 1859.

The Exhibition of the United States Agricultural Society was formally opened on Tuesday morning by a procession from the Tremont House, of the officers and guests of the Society in carriages,

escorted by the military. Upon arriving upon the grounds, and the officers taking their position upon the stand, the Rev. Mr. Whipple, Episcopal Bishop elect of Minnesota, came forward and invoked the blessing of the Almighty upon the undertaking. President Tilghman then delivered the opening address, which was highly practical and appropriate. Upon the conclusion, the Hon. J. J. Crittenden, of Kentucky, addressed the crowd, and was followed by Senator Douglas, who made a very short but beautiful and appropriate address.

The receipts up to the closing of gates this evening, are twenty-two thousand dollars.

The exhibition is full in every department, and certainly the greatest show, ever held in the United States. All the awards upon cattle have been made, and our two Maryland exhibitors, Messrs. James Howard McHenry and John Merryman have been among the largest prize takers. Below are enumerated their prizes:

To Mr. McHenry.

For Devon Bull, Uncas	1st pr.,	$100
" Imported Devon Cow, Myrtle	1st pr.,	75
" Devon Heifer, Florence	1st pr.,	40
" Devon Bull, Bravo	2d pr.,	15
" Devon Calf, Sunbeam	2d pr.,	10
" Alderney Herd	1st pr.,	100
" Alderney Bull, Reward	2d pr.,	50
" Alderney Cow, Lady Second	2d pr.,	30
" Alderney Heifer, Lassie	1st pr.,	40
" Alderney Heifer, Constance	1st pr.,	25
" Alderney Bull, Hector	1st pr.,	25

To Mr. Merryman.

For Hereford Herd		$50
" Imported Hereford Cow, Milton	1st pr.,	75
" Hereford Bull, Catalpa	1st pr.,	100
" Hereford Bull, Blenheim	1st pr.,	50
" Hereford Cow, Bloomy	1st pr.,	75
" Hereford Heifer, Promise	1st pr.,	40
" Hereford Heifer, Fillpail	1st pr.,	25
" Hereford Bull, Surprise	1st pr.,	25
" Hereford Calf, Expectation	2d pr.,	5
" Milch Cow, Better	2d pr.,	15
" Grade Heifer, Rose	2d pr.,	10
" Hampshire Down, Buck	2d pr.,	15

If anything were wanting to establish the fact that we have in our midst, some of the best herds of the country, this result ought to be conclusive. Maryland had other representatives of stock from the famous herd of Devons of George Patterson, Esq., exhibited by Col. Horace Capron, of Illinois, and H. N. Washburne, of Iowa. These gentlemen carried off the 1st and 2d prizes for Herds.

The Maryland exhibitors here declare that they are children of the Maryland State Agricultural Society, without the existence of that Society, they never would have appeared in the ring at Chicago, and the honor here achieved for Maryland would never have been recorded—then, will our next Legislature deny the aid asked for the perpetuation of the Society. We think not. S.

Jarvis Island Guano.

73 Smith's Wharf, Baltimore,
September 22, 1859.

To the Editor of the American Farmer:

Dear Sir: You were making some inquiries of me this morning in reference to the composition of Jarvis Island Guano. From the various analyses I have seen of it, I infer it must be of very different qualities. I received some time since from a house in New York a sample of the cargo of the "Black Hawk." It was chiefly in powder, but contained a few lumps, many of which were evidently crystallized gypsum or sulphate of lime. I obtained from it—

Lime	33.89
Magnesia	0.63
Iron	1.71
Alumina	0.35
Potash	0.02
Soda	0.28
Phosphoric acid	8.68
Sulpuric acid	38.33
Chlorine	0.44
Water and organic matter	13.87
Sand	1.22
	99.91

The chief ingredients then would be, calculating all the phosphoric acid as combined with lime, which, however, is not the case:

Bone Phosphate of Lime	18.81
Sulphate of Lime, or Plaster of Paris	65.16

My friend, Professor Morfit, in his very careful analysis published in your supplement for September, has shown that this guano resembles Colombian, in the composition of the phosphates occurring in the lumps disseminated through it. I have not had leisure to examine this matter carefully in the sample I received, and have, therefore, taken simply the usual agricultural expression for phosphoric acid. Should the results obtained by that skilful chemist from the cargo of the "Henry Brigham" be found applicable to the entire product of the island, it will be extremely interesting as shewing an analogy between these guanos and the hitherto exceptional phosphate from Monk's Island, known in the market as Colombian guano. We shall then have a better prospect of being able to determine the circumstances under which this peculiar modification of phosphate of lime is formed.

I may remark, in passing, that in all guanos in which this phosphate occurs, there is present a notable quantity of sulphate of lime, and no carbonate of that earth. In the first guano which I analyzed from Monk's Island, and which enabled me to establish the presence of the common phosphate in that variety, I found no less than 8.96 per cent. of sulphate of lime, and in some guano containing the phosphate, recently brought in from the Caribbean sea, I find very large quantities of gypsum. Dr. Morfit's detection of its presence in these new phosphates which contain such very large quantities of sulphate, adds another link to the chain which appears to bind these salts together. I simply state these facts without attempting to theorize upon them.

In reference to the pecuniary value of this cargo of Jarvis Island Guano, assuming AA Mexican to be worth $20 a ton, and taking plaster at $7, it will be expressed as follows:

18.8190 of Phosphate of Lime	$6 72
65.16 of Sulphate of Lime	4 56
	$11 28

Very respectfully, yours, &c.,
A. SNOWDEN PIGGOT, M. D.
Chemist.

The loss of the Austrians in the Italian war was, altogether, 1,164 officers and 48,500 men.

FLORICULTURE—October, 1859.

Prepared for the American Farmer, by Wm. D. Brackenridge, Florist.

The season is now close upon us, when we may expect cold nights, accompanied with slight frosts, therefore, no tender plants can be trusted out of doors with safety after the second week in the month; it is better to have your tender things in, ten days too early, than that they should be touched in the least by frosts; there are also many plants so constitutionally delicate, or having a foliage so tender, that they suffer from the damp cold of the evenings—all such things should be placed under glass in a frame, or removed to the Greenhouse, and receive plenty of air in mild weather, syringing them over-head in the morning with pure water, in order to preserve a humidity and keep down insects. But previous to moving in any plants, the house should be thoroughly cleansed in every part; and the heating apparatus; whether it consists of the old smoke flue, or by hot water in pipes, ought to be examined, in order to ascertain that all is in good working order; all painting and glazing should be performed at the same time; before housing, the pots must be washed clean, and the plants tied up neatly to stakes. Such hardy plants as Camellias, Ericas, Lauristinus, &c., &c., may be left out of doors, so long as they may be considered safe from frosts, by so doing, they will be in better condition to stand confinement in the house during the winter.

Roses.—If those growing in the open ground and intended to bloom in the greenhouse during the winter are not yet lifted and potted, no time should be lost in having this work performed; and towards the end of the month, all such as are tender—or to remain dormant during the winter for spring blooming—may be lifted and potted, or laid in by the roots in a frame, where they can be protected. The potted plants should be placed in a close, shady situation, until they begin to form rootlets, when they can be gradually exposed to the light and air. Rooted layers ought also to be lifted and potted, or placed in a frame as directed above. Continue to put in cuttings; and such as have already made roots should be placed in two or three inch pots before the roots get long and become matted in the cutting bed.

Chinese Primroses, for early winter blooming, should now receive their final shift; a light, rich open earth suits them best.

Chrysanthemums.—Continue to water with liquid manure, and expose the plants freely to the light and air, but see that the flower buds do not get injured by frosts.

Gloxinias, Achimenes and Gesnerias, when done blooming, should have the water gradually withdrawn, and when dormant, place the pots with the roots on their sides in a cool dry part of the greenhouse.

Pelargoniums should now be watered sparingly, and when removed to the greenhouse or conservatory, be placed in a light airy situation.

Scarlet Geraniums, Salvias, Bouvardias, &c., &c., growing in the open border, when wanted for the greenhouse, if not attended to as directed for last month, may yet be lifted and placed in pots, sheltering them at first in a frame, partially shaded, where they will make rootlets before being removed into the house.

Ten-week Stocks and Pansies.—Sow seeds of these now, and they will bloom with you in spring.

Summer Chrysanthemums and Heliotropes.—Put in cuttings of these in a frame, or under a bell glass.

Tender Annuals, for winter blooming, now standing out of doors, out to have the protection of a frame.

Orange and Lemon Trees should be top-dressed, and removed into the house, before frosts set in.

Calla Œthiopica.—The general stock may now be repotted.

Ixias, Sparaxis and the remainder of the Oxalises, may still be potted; see last month's directions.

Cactuses.—Place in a warm part of the house, and give water very sparingly.

Verbenas.—Towards the end of the month put in cuttings, and remove into the house or frame the pots having layers in them.

Fuchsias, done blooming, should be watered sparingly, and the plants placed in a cool dry place under the stage of the greenhouse or in the cellar.

Tulips, Hyacinths, Crocus and Narcissi, for blooming in the house, should now be placed in pots of rich, light earth, and for those out of doors, dig in your bed a good portion of well rotted manure, make the ground fine, and plant in drills about three inches deep, placing under each bulb a small portion of sharp sand.

Dahlias.—In the early part of the month these will be in their greatest perfection; should the weather prove dry, give copious waterings at the roots; keep them well tied up to the stake, and save seeds of choice kinds.

Hardy Herbaceous Plants may still be lifted, divided and replanted without danger of losing them.

Gladiolus, of choice kinds, should be lifted so soon as the foliage decays; place the bulbs in a cool airy place in the shade to dry; during the winter they are safe any place where Irish potatoes can be kept.

Save seeds of all showy annual and per-annual plants, but see to it on the other hand, that noxious weeds are not allowed to ripen and shed their seeds to add to your future annoyance.

Proceedings of the Executive Committee of the Maryland State Agricultural Society.

FREDERICK, Sept. 6th, 1859.

The committee met at the city of Frederick pursuant to notice. Present—John Merryman, Esq., President, and Messrs. S. P. Smith, Dennis, Mulliken and Brien.

The minutes of the last meeting having been read and approved,

On motion of Dr. Smith, a committee of three was ordered to be appointed by the Chair, to make the necessary arrangements with Mr. Bender, Chief of Police of Frederick city, for a police for the Exhibition; and also to make a contract for music with the bands of Frederick, and that the sum of $250 be appropriated for the purpose,

which was concurred in. The President, on motion, was requested to act as chairman, and he appointed Colonel Shriver and Valentine Adams, Esq., on the committee, who were subsequently authorized to make all necessary appointments, except those pertaining to the Treasurer's and Secretary's departments. The same committee was also authorized to make the necessary provision for the supply of feed, other than hay and straw, the latter articles being supplied by the County Society.

On motion of Dr. Smith, it was ordered, that exhibitors furnishing their own feed, shall be paid one-half the amount in cash to which their feed ticket would have entitled them.

On motion of Dr. Smith, the officers of the County Society present, were invited to partake in the deliberations of the Executive Committee.

Some conversation then took place, in regard to a change in the price of admission to the Show Grounds, when, on motion of Mr. Dennis, it was ordered, that the membership ticket, ($3) as usual, admit the member and his family, with his carriage, to the Show Grounds, and to compete for the premiums of the Society, and all other privileges under the constitution—that single admission tickets be 25 cents for each person, as now provided for in the rules, and that the Treasurer be authorized to issue *six* family tickets to any one person for $1, to be distinct from the regular admission tickets.

Mr. Dennis then moved that the carriages of persons other than members be admitted to the Grounds on the payment of 50 cents for a one-horse, and $1 for a two-horse carriage and driver, for each day, the occupants to pay the regular admission fee; which was dissented from.

Col. Shriver, from the County Society, suggested that the price of admission tickets at the gate be reduced to 15 cents each. Mr. Brien moved that the committee adopt the suggestion, but it was dissented from.

The President having called Mr. Dennis to the chair, expressed the great interest he felt that suitable arrangements be made to accommodate those from a distance, who might visit the Exhibition, with refreshments, and proposed that the officers of the County Society should have the matter under their charge, and that the space on the Grounds adjacent to the main road, be relinquished to them, for the letting out of the ground for booths, in which the visitors can be supplied with edibles, but that no spirituous liquors be allowed to be sold in the same. The proposition was concurred in. It was also ordered, that the booths now on the ground near the buildings, be removed.

Mr. Mullikin moved that the premium list be so amended, as to substitute the premiums contained in the list for last year of the County Society, in the Household Department, for that adopted by the Executive Committee at the May meeting, and that $50 instead of $20 be substituted for discretionary premiums, in the same department, which was adopted.

On motion of Mr. Brien, in the trials of speed, on Tuesday, the second premium was stricken out, and the list was amended as follows:

For the fastest Trotting Mare or Gelding, in harness, $20—and for the Fastest Trotting Mare or Gelding, in harness, $20.

On motion, the premiums in the Trials of Speed for Wednesday, were made to conform to those of Tuesday—and the second premiums for Thursday and Friday were stricken out.

Mr. Dennis moved that in the Dairy department, the premiums be changed as follows:—Where the premiums are $3, the same be changed to $5; and instead of $2, the premiums be changed to $3—which was concurred in.

Mr. Dennis moved that there be a separation of the premiums for "Natives" and "Grades"—and that the premiums now offered, be given to *each* class; and that premiums for bulls be added to each class, as in the lists for the full bred cattle—which was concurred in.

The Judges already appointed, are to act on Native Cattle—for "Grades," the following gentlemen were appointed:—Wm. Sutton, of Mass.; Dr. Nelson Read, of Alleghany Co., John B. Snouffer, and John Clemson, of Frederick Co., and Upton Scott, of Carroll County.

On motion, the premiums on "Mixed Wool Sheep" were ordered to correspond with those on "Middle wool"—and instead of "six," in the premium for a team of mules, "four" was substituted.

The President, on motion, was authorized to select an orator, and Friday, the 28th, at 2 o'clock, was fixed for the delivery of the Annual Address.

Rev. Dr. Morris, on motion of the President, was invited to deliver a lecture on insects, and Tuesday evening was appointed for the same, in some suitable hall, to be obtained for the purpose in the city of Frederick.

The Committee then adjourned.

Test, SAMUEL SANDS, *Secretary.*

PROFIT OF A GARDEN.—To show how much can be grown on a small spot of ground, we copy the following from a statement of Dr. Ostrander of Illinois:

"I was about to inform your readers the amount of luxuries that every farmer may enjoy from one-eighth of an acre. First, then, in 1857, I raised a few dwarf pears, three bushels of currants, three bushels of gooseberries, one hundred quarts of raspberries, ten quarts of Lawton blackberries, two hundred and forty quarts of strawberries, forty cabbages, two bushels of onions, one bushel vegetable oysters, two bushels Catawba grapes, four bushels husk tomatoes, one bushel pickels, one bushel of beets, and more pie-plants than I could use, besides radishes, melons, squashes and flowers. Cost of production, $5. This year expect ten times the amount of fruit of last. Now, farmers, take some of the time spent on corn, and some of the money wasted on doctors, and provide a garden. Keep healthy, and live happy, and eat the fruits of the land."

Here is a beautiful little paragraph which we find in one of our exchanges:

"If there is a man who can eat his bread in peace with God and man, it is the man who has brought that bread out of the earth. It is cankered by no fraud; it is wet by no tears; it is stained by no blood."

Enlarging a Farm Without Buying Land.

If a man does not know how much land he actually owns, and gets no benefit out of that part with which he is unacquainted, and then is informed that he has more, and is told how to use it, why is not this equivalent to the purchase of more acres? Farmers are often heard to exclaim: "Oh that I were rich enough to buy a little more land, then I could fatten more cattle and sheep, and I could carry more grain to market!" Now, to such men, at least to some of them, we beg leave to say, your farms are already larger than you suppose. You seem to think that your ownership extends only six inches deep into the earth; but this is a misapprehension. It is not very strange, however, since all the former owners of the soil had the same idea, and the Indians from whom your ancestors bought or stole the land, were content with only the surface, just enough to hunt upon and to grub a few roots out of. But this is all a mistake, as you will see on reflection. Examine the title deeds to your land and see if there is any limit to your rights in a downward direction. You will not find any; we know you wont.

Now therefore, do not fear to go at once and and take possession of the rest of your farm. It is virgin soil, covered over with only a few inches of partly worn land; and it will return you fine crops if you will only lay it open to the sun and air, or mix it with the soil you have long cultivated. Perhaps it will not be wise for you to try to use it all the first year; use a little moderation in entering upon your new property, for your own sake and for the farm's sake.

Here is what some writer has said on the subject—not strictly correct perhaps, but highly suggestive: "At the present time the average crop of wheat per acre in Great Britain, on a soil cultivated for centuries, is about double that produced on the comparatively new soil of Ohio. Why is this? Simply because the leading British farmers are educated men, and apply their work wisely. They pay back to the earth what they borrow from her; they endeavour by every means in their power to enrich their ground, and in return it enriches them. If American farmers, instead of labouring to double the number of their acres, would endeavour to double their crops, they would find it a saving of time and toil, and an increase of profit. * * * Many men never think of digging ten inches into the soil, unless they have dreamed about a crock of gold, hid in the earth; but if they would set about the work of digging in earnest, every man would find his crock of gold without the aid of dreams or divination."

We once heard of some remarkable strawberries raised in a neighbouring town, and called the "Washington Excelsior" strawberry. Rumor said that the leaves were large, vividly green all summer—the fruit large and abundant for a long time, and not diminished by the severest droughts. The plants were sold at a half dollar apiece, and were considered cheap at that price. Attracted by these wonderful stories of the new fruit, we went to see it and learn all about it. The plants were indeed beautiful, and the fruit very fine. But our eyes were opened, when Mr. Smith, the owner, told us frankly, that the plants were some common sort, the name of which he had forgotten, but that they were grown on a bed in the corner of his garden, which was *made ground for at least six feet deep*. Why did this not account for the persistent verdure of the foliage and the size and abundance of the fruit? Yet, the superior beauty of the plants and berries had attracted much attention in the neighbourhood, and seemed to call for a high sounding name; and so Mr. Smith dubbed them the Washington Excelsior. Plainly, this man's strawberry bed was enlarged without fencing in more land. *American Agriculturist.*

The Tobacco and Tobacco Soil of Maryland.

Dr. Charles T. Jackson, an eminent chemist of Boston, under instructions from the United States Patent Office, has made the following minute analyses of the tobacco and tobacco soil of Prince George's county, in this State. Nearly eight months were industriously spent in executing this difficult work, indicating it to be both costly and difficult, at the expense of the general government. Its object was to ascertain the proportions of ingredients in the soils appropriated to the product of tobacco, so that the planter may at once be able to estimate the capability of the soil and to see what ingredients he must add to an exhausted field to replenish it.

The following table exhibits analyses of soil from Prince George's county, Maryland, from a field which produced the best tobacco—the surface soil to the depth of ten inches—and the subsoil ten inches deep, taken to the depth of twenty inches; also of soil obtained in the same manner from a field which produced a smaller crop of tobacco:

Analyses of Tobacco Soils of Prince George's Co.

	Rich Soil.		Poor Soil.	
	Surface Soil.	Sub-soil.	Surface Soil.	Sub-soil.
Silica	82.5600	85.250	88.0000	88.5000
Alumina	3.4600	3.840	3.0000	3.5000
Lime	0.3100	0.005	1.4000	0.0080
Magnesia	0.8600	0.580	0.2500	1.0500
Potash	4.6000	2.510	1.8800	2.0000
Soda	1.1000	0.620	0.4700	0.7000
Peroxyde of iron and manganese	3.3600	3.260	2.7000	2.2330
Sulphuric acid	0.0017	.....	0.0010	0.0010
Phosphoric acid	0.5000	0.393	0.3000	0.0170
Chlorine	0.0005	0.001	0.0030	0.0024
Nitric acid, trace	.....	.....	.....	.....
Carbonic acid	0.2000	0.200	0.3000	0.2000
Ammonia	0.0850	0.082	0.0112	0.0114
Crenic, apocrenic and humic acid	0.3500	0.245	0.2200	0.1500
Carbonaceous matt'r, insoluble humus	2.5500	3.014	1.7688	1.8486
	99.9372	100.000	100.3040	100.2214

The above analyses which the chemist compared with the analyses of soil from the Connecticut river alluvion (producing from 2,000 to 2,500 pounds of tobacco per acre) shows that the Maryland soils contain a much larger proportion of valuable magnesia than those of the Connecticut river alluvion, and hence the large proportion of magnesia in the Maryland tobacco, while the lime salts take the place of the magnesian

in the Massachusetts tobacco. The Connecticut river tobacco soils need the addition of a sulphate, either in the form of a sulphate of magnesia, or sulphate of potash, and the Maryland soils need more organic matter in the form of soluble humus and ammonia-producing manures.

Analyses of Tobacco Plants from Prince George's County.

	Best soil.		Much worn soil.	
	Leaf.	Stalk.	Leaf.	Stalk.
Silica and silicious dust..	8.60	2.40	21.20	3.20
Phosphoric acid.....	8.50	12.52	7.15	10.28
Lime.....	22.66	11.48	25.85	23.88
Potash.....	17.60	40.12	20.32	27.48
Soda.....	1.40	9.20	4.36	7.28
Magnesia	8.00	0.80	2.00	0.40
Peroxyde of iron and manganese.....	2.80	1.40	1.20	1.30
Chlorine	3.76	2.96	0.92	3.12
Sulphuric acid.....	8.00	2.04	1.52	4.48
Carbonic acid.....	18.40	16.00	14.80	18.00
Loss.....	0.28	1.08	0.48	0.58
	100.00	100.00	100.00	100.00

The ashes analysed in the first column of the above table were obtained from 500 grains of the *leaves* of best tobacco, which dried at 212. deg F., and burnt gave 72.65 grains of ashes, or 14.53 per cent. The second column shows the product of 500 grains of the *stalk* of best tobacco, which, dried and burnt, left 46 grains of ashes, or 9.2 per cent. The third column, same as the first, but obtained from much worn land, gave 73.8 of ashes, or 14.76 per cent. The fourth column, same as the second, but obtained from much worn land, gave 43.6 grains of ashes, or 8.72 per cent.

It will be seen from the second column that it is quite important to restore the tobacco stalks to the soil, since they carry 40 per cent. of potash, 9 per cent. of soda, and 12½ per cent. of phosphoric acid, all valuable ingredients. If the soil need humus it will be best to rot the stalks, but if it contain an abundance of vegetable matter, they should be burned.

From the third column it would appear that there is a large proportion of silica combined with the substance of the plants raised on poorer soil.

The fourth column exhibits a remarkable proportion of lime, more than twice as much as that in the stalks from the most fertile soil, but there is a great falling off in the potash, and some in phosphoric acid and soda. Lime seems to have been substituted in part for potash. In this case a liberal dressing with wood ashes would be the proper fertilizer.

In the analysis of the ash of tobacco seeds, the phosphates and the potash are the most important ingredients, as they are of most seeds. The green tobacco plant contains 88 per cent. of water, charged with saline matter, and so, when 100 pounds of tobacco are dried, they weigh but 12 pounds, and all the salts that were contained in 88 pounds of juice, are concentrated in 12 pounds of dry leaves. This is why tobacco yields so large a proportion of ashes. Tobacco being a great exhauster of the mineral salts, a comparison of the analyses of soils with the analyses of tobacco ashes will determine at once what is wanted to improve or replenish tobacco soil. Dr. Jackson, in concluding his report, expresses his belief that the analyses above given are more extended and accurate than any soil-analysis ever before published.

Cleveland Horses—Improved Short Horned Cattle.

We copy from the *Boston Cultivator* a letter of Mr. Sandford Howard, one of the editors, now in England. His remarks on the Cleveland horses and origin of the improved Short Horns and the famous herd of Mr. Booth will be found interesting:

LIVERPOOL, July 28th, 1859.

I have just returned here from a visit to the counties of York and Durham, my business being to examine the horses of that district, generally, and the coaching variety called Cleveland Bays in particular. This stock has long been esteemed for gentlemen's coaches. They appear to have been originally a rather tall kind of draft horse, with smooth legs, and almost uniformly of a handsome bay color. They have been crossed with the race-horse till more elegance of form has been obtained, with less weight, though about the same height as the former stock. But in crossing with the race-horse, it has often been the case that a weedy, soft kind of an animal has been used, and the result is that much of the stock is wanting in firmness, compactness, and proper action. It is true that hardiness and ability to labor are not much required in this variety—coach-horses being generally subjected to only moderate work—yet the possession of these qualities would render the breed more valuable, as it would multiply the purposes for which it might be used.

Attention seems to have been particularly drawn to the Cleveland horses within a few years, and a few breeders, who have produced the best animals, have found a ready demand for them at high prices. I found that the entire horses which received the best prizes at the show of the Yorkshire Agricultural Society last year, in the aged class, and many others, had been sold to go to the Continent. They have been sought after, also, from our own country—Mr. Rives, late Minister to London, and Mr. Dulany, both of Virginia, having introduced specimens into that State. Dr. John R. Woods, of Ivy Depot, Albemarle county, Va., purchased last year the noted Cleveland horse Napier, which unfortunately was lost on the passage. I have just succeeded in purchasing for him the four-year-old horse Symmetry; bred by Mr. J. Daniel, of Widdington, near Green Hammeston, Yorkshire, lately owned by Mr. Stephen Kirby, of Thirsk. I consider him decidedly the best of the breed I have seen—uniting size, strength and beauty with good trotting action. He was by Perfect, dam by Skyrocket, grandam by Winterfield, &c. Her dam has received many prizes, and all her progeny, numbering several of both sexes, have received prizes. The horse will be shipped in a few days, and I trust will reach Dr. Woods, in safety, in which case I can scarcely doubt that he will remunerate him for heavy losses suffered in former enterprises of this kind.

I spent a day or two in the northern part of Yorkshire and in the adjoining county of Durham, along the famed valley of the Tees—the classic ground of Short-horn cattle. The soil is mostly strong, sometimes too much inclining to clay, but excellent for grass. I was surprised to find here some of the poorest farming I have seen in Britain. The foulness of the crops, the clumsiness and antiquated character of the implements, and the general slovenliness of the steadings and fields, would disgrace even a Mohawk Dutchman. I am not to be understood that this is the character of all the farming in this district, but it is certainly too much so of a considerable portion.

I have alluded to this section as having been the early home of the English Short-horn cattle. So far as can be ascertained from history and tradition, they were first introduced from the Continent, and were known as the "Short-horn or Dutch breed." In process of time the breed, by crossing and otherwise, underwent various changes, and from the improvement attained by the cattle of this valley, they became known as the Tees-water breed. Subsequently, from the notoriety of the stock of some leading breeders on the Durham side (the Collings and others) it took the name of Durham breed, and afterwards that of Improved Short-horn breed. It is remarkable, however, that notwithstanding this territory was early occupied by the Short-horns, they are by no means the exclusive possessors of it at this time. Many Irish cattle are seen in the fields—a stock mostly of Long-horn extraction, with an infusion, in various degrees, of Short-horn blood.

The improved variety of Short-horns are not so generally kept in this district as one might suppose. They are mostly in the hands of professional breeders, or those who sell breeding stock. Several noted men of this class have resided here. The residence of the late Thomas Bates, who was well known in America, was at Kirkleavington, near Yarm, Durham. I was there a few days since, but found little of interest about the place, except in its associations. Since Mr. Bates's death, no attention is here paid to the breeding of cattle—most of those seen on the farm occupied by him and in the neighbourhood, being of quite indifferent character.

I had also the pleasure, lately, of visiting Warlaby, the residence of Rich'd Booth, Esq., whose fame as a breeder of Short-horns is at this time greater, perhaps, than that of any other man. In my letters from this country last year, I spoke of his stock as shown at the exhibitions of the Royal and of the Yorkshire Agricultural Societies, and I also mentioned some specimens of the herd in connection with a decision at the late meeting of the R. A. S. at Warwick. But my opinion in regard to the superiority of the stock has been still more highly raised by the opportunity of examining the whole herd. I have previously spoken of the points in which Mr. Booth's herd excels, viz: the fineness of the crop and chine, the smoothness of the shoulder-points and the fulness of the first ribs. To these I might add, general evenness of carcass, and greater thickness of flesh on the most valuable parts than I have ever seen in any other Short-horns.

Mr. B. has obtained these points (in which Short-horns generally are greatly wanting) without any sacrifice of other properties possessed by the breed at large. His stock have every appearance of good constitution, and some of the most noted prize-takers have been unusually prolific. The *wonderful* cow, Nectarine-blossom, (which I spoke of particularly last year,) five years old, has produced three calves which have been reared, and other cows in the herd have been equally prolific for even a greater length of time.

The decision to which I alluded in my last, in regard to Mr. Booth's heifer Queen-of-the-Isles, is very generally disagreed to, and although it excites much comment among breeders, will not injure Mr. B. He informed me that he never had so many applications for the hire of bulls, as within the last few weeks. I may here remark that he lets many bulls by the year—has now upwards of twenty disposed of in this way in different parts of the kingdom, the prices ranging from one hundred to two hundred guineas each. The aggregate sum which he receives for the use of bulls is from £3,000 to £4,000 ($15,000 to $20,000) a year.

The common kind of Short-horns are not very good cattle; they are apt to be coarse-boned and coarse-fleshed, and are large consumers in proportion to the returns they yield. It is remarkable how frequently stock of this description is met with, even in the immediate neighbourhood of noted herds. On a farm near Mr. Booth's, I noticed a large stock, mostly as rough and *uncultivated* as though their owners had never seen or heard of the far-famed Warlaby bulls.

Popular Fallacies about Flowers.

It is a fallacy which many people entertain, that flowers will grow and flourish without care.

It is another, that weeds will die of themselves without being pulled up.

It is another, that a flower garden looks as well where plants and seeds are set out, without any regard to harmony of colour, height, period of flowering, &c., as where due regard has been paid to all these things.

It is a fallacy which some people hold, that it will not pay for the trouble and expense to cultivate flowers.

It is a fallacy to suppose, that because a plant has a high sounding or almost unpronounceable name, that *therefore* it must be beautiful and worth buying.

It is a fallacy, equally absurd, to consider a plant unworthy of cultivation, because *everybody* has got it.

It is a fallacy to suppose, that because you can get a homely plant, which you do *not* want, for nothing, it is as cheap as one you *do* want, for which you would have to pay a trifle.

It is a fallacy for a man to consider, that it is beneath *his* dignity to cultivate flowers, and that it is work only fit for women and children.

It is a fallacy to suppose, that a man whose business it is to sell flowers and plants, will always give disinterested advice concerning them.

It is another to imagine, that to have any display of flowers at all, you must employ an experienced gardener, at ever so many dollars per month.—*Country Gentleman.*

Conflicts of Labour and Capital.

It seems that free labour is far from being satisfied with the exactions of capital, and finds sufficient reason, not for running away from masters, but for refusing service unless its terms are essentially modified. The great army of London builders evidently considers the advantage now altogether in favour of employers. Muscles and sinews, skill and experience, therefore, will no longer push the plane, drive the saw, turn the lathe, wield the hammer or use the trowel, while nine hours of labour are required each day. So in the great city of London the progress of building is suddenly stopped. Sixty thousand operatives in the various mechanical departments of the building trade are idle, and the supply of bread to more than three hundred thousand human beings is suddenly arrested.

What an army of dissatisfied men is at once thrown into the streets as fit instruments for public disorder! How the ranks of absolute poverty and want are swelled until the bare contemplation is fearful. But this is only the natural result of the present relation of capital and labour in every free community.

Capital seeks to obtain the most service for the least remuneration. Labour strives to convert its expenditure of energy into as much of the standard coin of the realm as possible. But the advantage is always with capital. Hunger and destitution, emaciation and despair, are its most potent auxiliaries, and are sure, at length, to reduce its refractory subjects to subjection.

What real benefit to the labourer did the Manchester riots accomplish, when thousands of operatives left their looms and even threatened revolution unless their grievances were redressed? What but private distress and public uneasiness have followed the long succession of revolts of labour, in free communities, against capital?

These periodic outbreaks show, however, the weakness of that social organization in which no sympathy, no tie of family or interest, binds labour and capital together. Does no danger threaten the safety of property and menace society itself, when sixty thousand men, by some mysterious decree, are forced at an hour's warning to abandon the means of a livelihood, and permit the horrors of starvation to invade their homes rather than dispute its authority?

In England, the labouring population, at least those belonging to the different trades and manufactures, are thoroughly organized, with boards of officers and a central committee, wielding a mighty power for good or evil. If such an organization has not been transplanted in this country, it is because labour is not yet reduced to starvation prices. But the tendency, as population increases and competition brings down the value of skill, is to organize labour against capital—to array the poor against the rich—an antagonism as old as the secession of the Roman plebians to Mount Loca, and increasing in intensity as the difficulty grows for strong arms and stout sinews to obtain bread.

If free labour strikes in this country have not arrested public works and closed the operations of private enterprise, the voice of the unemployed labourer has been heard in the streets of metropolitan New York demanding bread. Amid the drifting snow of a tempestuous, winter day, thousands of stalwart, desperate men have filled the streets, and gathering under the shadow of the Municipal Hall, hoarsely and savagely claimed work, as the means of banishing starvation from their hearths, or sustenance without work as their right.

It is not impossible, when the rush to our great cities has increased the one hundred or six hundred thousand of population to one or more millions, that starving labour may take with violent hands what capital is not ready to give as fair wages for employment.

There is a strong tendency to agrarianism among the more independent of the great mass of the people in this country, that, under other names, even now has no little influence at the ballot-box, and through the concession of rival political parties in the councils of the nation itself. Free lands and free labour may yet become terms easily convertible into a division of individual property.

The union of capital and labour, by the institution of slavery, cures all such tendencies. We, of the South, have no "labour strikes," because our labourers form part of the family of the capitalist, and his success is also theirs. No care intrudes into their cottages. No hideous vision of want grins horribly upon them. No day of destitution and sickness without help and tender nursing dawns for them.

The effect of this happy parallelism of naturally opposing interests upon the enterprise of the South, when capital accumulates so as to make her a manufacturing as well as an agricultural region, can even now be anticipated. These periodic outbreaks denominated "labour strikes" can never find a foothold on Southern soil. The calculations and arrangements of capitalists cannot be broken up and destroyed by the sudden loss of hands to work the vast and complicated machinery of their industry.

We doubt not that the great London strike of the builders for only nine hours of work per day, and the less but quite as recent combination of the journeymen bakers of New York to limit the demand of capital upon their toil to twelve hours of the twenty-four, might suggest to unprejudiced minds the inquiry, whether classes requiring an amelioration of their condition do not exist nearer home than the well fed, careless and jolly negro of the Southern plantations.—*N. O. Picayune.*

Effect of Bones and other Manures on Plants.

"That certain manures produce very powerful effect on various plants, was an early remark of the cultivators of the soil." An article exemplifying this statement, by C. W. Johnson, Esq., appears in the *Mark Lane Express*, from which we propose to condense a few paragraphs for our readers.

Phosphate of lime promotes in a remarkable degree the growth of clover. An instance showing this is related by Mr. Dixon, in his prize essay on the Manuring of Grass Land. A pasture of 20 acres was heavily dressed with broken bones nearly 70 years ago, and kept in grass without plowing.—The dry portions of the field was remarkably fertile, but such parts of the ground as were wet, had scarcely any other covering than

carex and the coarsest grasses. Mr. D. on becoming tenant, set about draining the wet parts In regard to this he says:

"In the operation we found, at from five to eight inches from the surface, much bone, in various states of decomposition; the large pieces when broken, appeared fresh inside. I felt at the time some regret that much value must have been lost for many years, and, as I then supposed, forever lost, on account of the manure having been in a soil saturated with water ever since it had been laid on. However, before my draining operations had been completed twelve months, the coarse herbage began to disappear, and in its place appeared white clover, marl clover, and others of the best pasture grasses; and in the second summer after being drained, the soil was equally luxuriant with the natural dry parts of the land."

Of another case it is said:

"Previous to boning, the herbage on these pastures were of the poorest kind imaginable—there being few of any plants except the small carex. In the second summer after boning, the carex had disappeared, and the pasture had become long and thick-set with white clover, cow grass, or marl clover, and trefoil."

Messrs. Laws and Gilbert, in the last half volume of the Royal Agricultural Society, report a course of experiments with different manures in permanent grass land. They sum up the result as follows:

"That the effect of a mixed, but purely *mineral manure* upon the complex herbage of permanent meadow land was chiefly to develop the growth of the *leguminous* plants (clover, &c.) it contained, and scarcely to increase at all the produce of the *graminaceous* plants, or commonly called *natural grasses*. That the action of purely nitrogenous manures upon the permanent meadow, was to discourage the growth of the *leguminous* herbage, and to increase the produce of the *graminaceous* hay. * * * That peculiar *carbonaceous* manures had little or no beneficial effect on the amount of produce of the hay."

We may see at home the change of vegetation produced either by breaking up, or clearing land, by burning off the turf of mucky swamps, etc., and sometimes by turning up lower strata of earth by deep plowing. Forests burned over, send up a thick growth of fire weed, followed soon by brambles of different kinds of trees and plants often introduced by occurences which bring their appropriate food before them. They are not "spontaneously" generated, but grow from seeds lying dormant in the soil, or carried there by the wind, birds, or animals, and the subject is worthy of closer investigation, but we can devote no more space to it to-day.—*Country Gentleman.*

MACATUEGAN, OR FIRE-BACKED COCK.—This splendid and magnificent bird is destitute of comb, but has a delicate tuft of feathers on the crown of the head. It is a native of Sumatra, very wild and apparently incapable of domestication. This is the rarest of the fowl kind; has such brilliant feathers on its back as to resemble fire, which gives it its name. The young acquire this perfect brilliancy in their third year, but some authors differ as to this. J. J. B.

Persian Insect Powder.

[We had the pleasure in May last of seeing the *Pyrethrum* growing in the propagating garden attached to the Patent Office. It has been tried there and found very fatal to insects. It is possible that it may prove a preventive against the attacks of the borer in the Peach and in the Apple. —*Eds.*]

"For a long period, a preparation was used throughout the Russian Caucasus for the destruction of injurious insects, and was regarded as a secret to the rest of the world, until its properties became known to Mr. Jumtikoff, an Armenian merchant, while traveling through that country some forty or fifty years ago. He communicated his discovery to his son, who manufactured the article in 1828. This powder, or the plant from which it was obtained, was soon after introduced into Alexandropol, and subsequently into Germany, where its popularity is rapidly increasing.

There are several plants similar in character, called by botanists *Pyrethrum carneum*, *Pyrethrum roseum* and *Pyrethrum purpureum*, (Persian cammomile, flea-grass, or flea-killer,) from which this powder is procured, consisting of small perennial shrubs, from 12 to 15 inches in height, bearing flowers an inch and a half in diameter, and resembling those of the ox-eye daisy, (*Chrysonthemum leucanthemum*,) except in color. They grow on the mountains of the Caucasus, at an elevation of 5,650 feet above the level of the sea, in a temperature of 68° F. They are of easy cultivation in gardens, and since their hardiness have become known, they have been introduced into Germany, Holland and France, for the purpose of ornament, where they begin to flower in June. They will flourish in any ordinary garden soil, and may be propagated by layers as well as by seeds.

The parts of the plants from which the powder is made are the dried flower-heads, gathered, when ripe, on fine days, and usually dried by exposure to the sun; but they have have been found to be more serviceable when dried in the shade, during which operation they are occasionally turned. In the process of desiccation they lose about 90 per cent. When perfectly dried, they are first comminuted with the hand, and then reduced to powder in a small mill.

A quantity of these plants grown upon 18 square rods is estimated to furnish 100 pounds of powder, which is best preserved in sealed vessels of glass. The application is made either as a powder or as an infusion, though in the latter form, it is more beneficial, especially when intended for the destruction of insects on plants. The dried leaves only should be used for an infusion, as the green ones are ineffectual. The powder may be applied directly to the insects themselves, or in the places which they frequent. They are attracted by its smell, become stupified, and immediately die. This substance may be employed without injury to the larger animals or man. It is estimated that the amount of this powder consumed, per annum, in Russia alone, is nearly 1,000,000 pounds.

At present, there are more than twenty villages in the district of Alexandropol engaged in cultivating the plant and collecting its flowers and leaves."—*U. S. Patent Office Report*, 1857.

Feeding Cows in a Butter Dairy.

The great authority on this subject, says the *Gardener's Chronicle*, is Mr. Horsfall, who has laid the public under great obligations to himself for the publication of his experiments and views on this interesting question. His method of feeding is the following: In May his cows are turned out on rich pasture near the homestead; towards evening they are housed for the night, when they are supplied with a mess of a steamed mixture, (to be afterwards described,) and a little hay each morning and evening. During June mown grass is given to them instead of hay, and they are also allowed two feeds of steamed mixture. This treatment is continued till October, when they are again wholly housed. After this they receive steamed food *ad libitum* three times per day. After each meal cabbages are given, from October till December; Kohl Rabi till February; and mangel till grass-time—the supply of each of these varieties of green food being limited to 30 or 35 pounds per day for each cow; 4 pounds of meadow hay are also allowed after each meal, or 12 pounds per day for each cow, and water is placed before them twice a day, of which they partake as much as they feel inclined for.

The steamed food consists of "5 pounds of rape-cake, 2 pounds of bran, for each cow, mixed with a sufficient quantity of bean-straw, oat straw, and shells of oats, in equal proportions, to supply them three times a day with as much as they will eat. The whole of the materials are moistened and blended together, and, after being well steamed, are given to the animals in a warm state. The attendant is allowed 1 pound to 1½ pounds of bean-meal per cow, according to circumstances, which he is charged to give to each cow in proportion to the yield of milk, those in full milk getting 2 pounds each per day, others but little; it is dry, and mixed with the steamed food on its being dealt out separately."

This is certainly high feeding, but it is amply repaid by the results; for while cows fed in the ordinary way seldom produce milk which yields more than 1 oz. to every quart, Mr. Horsfall's milk gives upwards of 1½ ozs. for every quart. It is also an important part of his system never to allow his cows to fall off in condition. He considers the maintenance of the condition essential to a large yield of milk. There can be no doubt of the soundness of this opinion. A cow low in condition cannot give the same quantity of milk, as much of the nourishment of the food is drawn off to make up the condition of the animal. And when a very lean cow is put on rich food, it is some weeks before the full benefit of the food can be obtained in milk for the reason stated above. In Scotland bran is not very often used as an ingredient in any mixture of food for milk cows; but it will be seen from the foregoing that it forms an important part of Mr. Horsfall's mixture.

Some time ago we came upon the following extract, we believe from the *Irish Farmers' Gazette*, which gives some valuable hints as to the use of different substances in the feeding of milk cows: "In reading over the experiments on feeding in Stephens, a difference of opinion exists as to the comparative fattening qualities of linseed cake, bean and other meal; and in the 'Report of the Larne National Agricultural School for 1853,' 1 pound of beans is said to be equal in fattening qualities to 30 pounds of turnips, and nearly 3 pounds of oatmeal."

Feeding and Increase of Cattle.

We find in the *Genesee Farmer*, some experimental facts in relation to feeding sheep and oxen, which we think eminently deserve attention. Mr. Johnston is one of the leading farmers of Western New York, and he can work as well as write. His statement, in the matter of which he treats in the present communication, is like all his statements, the result of practice under his own eye. He says: I am feeding five hundred sheep this winter. They are fat now; am feeding largely of oil-cake meal, as usual. I also feed eleven good cattle, with which I have been experimenting a little, and have facts put together, which are at your service.

Fact first—I bought six steers, over five years old, in fair condition, that had never been fed either roots or meal of any kind. I put them to hay and meal November 23d, their weight then being from 1175 to 1370 pounds, averaging 1257. Weighed at the end of thirty-five days and found an average increase of 74 pounds, but the two largest ones 90 pounds each, and the two smallest only gained 50 and 55 pounds each, though to the eye they appeared to have made most fat. A gain of 90 pounds in the first thirty-five days' stall feeding seems incredible, but such is the fact. I have long been aware that the largest cattle pay best for good feed, either in summer or winter, but was not prepared to find such a difference. They were all fed alike, and in stalls, so that each got the same quantity of meal.

Fact second—I put up two steers, rising of four years old, quite fat, grade Devons, weighing at the time 1150 and 1220 pounds. Gain in thirty-five days only 20 and 30 pounds, the smallest gaining least. From this it would appear that it is unprofitable to feed cattle after they are really fat.

Fact third—I put up two steers, rising of four years old, and lean, but good common stock, weighing when put up 1180 and 1300 pounds. Gain in thirty-five days 62½ and 75 pounds, the smallest gaining least. I also put up a heifer, rising three years, weight 1025 pounds. Gain in thirty-five days 55 pounds. She is of fine bone and horn, long in the body, broad on the loins, grade Durham, lays on fat very fast. There was no Durham or Hereford blood in any of the others. I should be pleased to know if any of those aristocratic breeds put on over 90 pounds increase in the first thirty-five days of stall-feeding.

Fact fourth—I have found that cattle fed on hay and meal, and weighing from 1230 to 1460 pounds if weighed at four o'clock, P. M., and then shut up from food and water until next morning at eight o'clock, will shrink 45 to 50 pounds. This is much more than I expected. I find that sheep weighing from 120 to 150 pounds, shut up the same length of time, shrink only 3 pounds. This is less than I expected. I intend to weigh again at the end of thirty-five days, and if offering anything worthy of note, you shall hear of it.—JOHN JOHNSTON, *near Geneva, N. Y., Jan.* 8, 1859.

Baltimore Markets, Sept. 26.

There is little change to note in the markets since the issue of our last monthly supplement. Grain is a shade better. Tobacco of the better qualities is in active demand. The market for Fertilizers is active, but no change in prices. One of the cargoes of Peruvian Guano reported heretofore as having sailed from Callao in June, has arrived. It has produced no effect on prices.

COTTON.—Cotton ranges for the different grades from 12¼ to 13¼ cents.

FLOUR.—We quote Howard street Super at $5; Extra, $5.50 to $5.75; Ohio Super, $5; Ohio Extra, $5.50; City Mills Super, $5; City Mills Extra, $5.75; Family, $7.25 to $7.75; Extra, $6.75 per bbl.

Rye Flour.—Rye Flour, $4.25 to $4.50.

Corn Meal.—Corn Meal, $4 to $4.12½.

GRAIN.—*Wheat.*—We quote red Wheat at $1.05 to $1.15; white, $1.05 to $1.10 for common, $1.12 to $1.25 for medium to fair; $1.28 to $1.37 for good to prime, and $1.40 to $1.45, prime to choice.

Corn.—Corn, 81 to 82 for white, and 82 to 83 cents for yellow.

Rye.—Rye, 75 to 80 for Maryland, and 88 to 90 cents for Penna.

Oats.—Oats, 30 to 36 cents for Maryland, 38 to 40 for Penna.

GUANO.—We quote Peruvian at $61 to $62 per long ton, according to quantity—the latter being for a single ton and upwards. For less than a ton, at the rate of $56 per ton of 2000 lbs.; California or Elide Guano, $45 per short ton; Manipulated, $47; Super-Phosphate, $45; Mexican AA, $20 to $22; Mexican A, $16; Sombrero, $32 per long ton, and Colombian $40, and very scarce. Ground Bones, $25 to $27 per 2000 lbs. and very scarce.

SEEDS.—Timothy we quote at $2.50 to $2.75; Clover-seed, $5.35 to $5.50.

FISH.—Mackerel, $9 25 to $9.50 for new No. 3's, and $8 for old; $14 to $15 for new No. 2's, and $16.50 per bbl. for No. 1's. Eastern Herrings, $3 to $3.50 for good to prime. Alewives, $4 to $4.50.

HAY AND STRAW.—Hay, $16 to $17 for new baled; $14 to $15 for loose. Rye Straw, $14 to $15. Oats, $10 to $12. Wheat, $9 to $10.

MILL FEED.—Mill Feed, 13 to 15 cents for Brown Stuff, and 27 to 30 cents for Middlings.

PROVISIONS.—*Bacon.*—Shoulders, 7¾ to 7¾; Sides, 10 to 10¼; Hams, 10½ to 13½ cents.

Pork.—Mess, $14.25 to $15.75; Prime, $11.50; Rump, $10.50.

TOBACCO.—We quote ground leaf at $3 to $5; inferior to good common, $3 to $4.50; ordinary to fair middling, $5 to $6.50, and good to fine, $7 to $12. For Bay Tobacco the demand is only moderate at former prices, viz: tips at $3.50 to $4; ground leaf, $5 to $7; brown reds, $9 to $9.50; yellows, $12 to $16. Ohio Tobacco—we quote inferior to good common green and brown at $4 to $5; medium to good brown and spangled, $7.50 to $9, and fine wrappery reds and fine yellow, $10 to $16. Kentucky Tobacco continues quiet; we quote common lugs at $4.50 to $4.75; good do., $5.25 to $5.50; inferior leaf, $5.75 to $6.25; good do., $6.50 to $7.50; fine, $7.50 to $9; choice, $10 to $12, and rich heavy Kentucky at $7 to $14.

WOOL.—Wool, 22 to 24 cents for unwashed; 31 to 33 for common tub washed; 35 to 37 for extra do.; 27 to 30 for No. 1 pulled; 33 to 36 for pulled Merino, and 30 to 45 for fleece Wool.

CATTLE MARKET.—The receipts of Beef Cattle to-day were again large, the offerings at the scales reaching about 1,500 head. The market was, however, dull and quite heavy, and only about half the receipts were disposed of, the balance remaining over unsold. The sales, all of which were made to Baltimore butchers, embraced some 700 to 800 head at from $2.50 to $4 per 100 lbs. gross; these figures being ¼ less than last week's rates. For a lot of very fine Ohio Cattle a shade higher than $4 was offered, but it was refused, the owner preferring to drive them to another market.

HOGS.—Hogs continue in fair supply, but the market for them is rather dull, and prices are a shade lower. We quote them this week at $7a$8.25 per 100 lbs. net for inferior to prime lots.

SHEEP.—Sheep are steady at last week's quotations, viz: $2.25a$3.50 per head. Both the demand and supply is fair.

NEW ADVERTISEMENTS.

Challen, Jas. & Son—Carpentry Made Easy.
Davis, Franklin—Fruit Trees.
Evans, R. H.—Farm in Maryland.
Farrel, E. & Co.—Iron Burr Mill.
Feast, Samuel & Sons—Fruit and Ornamental Trees.
Goldsborough, Martin—Stalls, Coops, &c. at Md. Show.
Gough, R. T.—Farm in Maryland.
Kettlewell, John—Original Manipulated Guano.
Kimberly Brothers—Cereal Fertilizer,
Norris, Thomas—Smith's Smut Machine.
" " " Ploughs, Harrows, &c.
"Office"—Land Wanted on Shares.
Peters, Richard—Cashmere Goats.
Patterson & Murguiondo—Esmeralda Guano.
Reichard, D. M.—Cedar Glen Nurseries.
Richardson, J. D.—Wood Burnt Lime.
Reagles & Co.—Catalogue of Nurserymen, &c.
Sinclair, R. Jr. & Co.—Patent Cider Mill and Press.
Saul, John—Nursery.

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VALUABLE FARM FOR SALE.

The subscriber offers for sale at the Court House door, in Leonardtown, St. Mary's county, Md., on the 15th day of November next, if fair, if not, the next fair day, the Farm of the late Bennett Gough. This Farm contains 400 acres, more or less, and is supplied with every necessary building. It is situated directly on the POTOMAC RIVER, within six miles of the county town. The terms of sale are one-third cash, the balance in equal instalments of one, two, three, four and five years, bearing interest from day of sale, payable annually, and secured by a mortgage on the property.

R. T. GOUGH, Agent,
oct-2t* Leonardtown, Maryland.

WOOD BURNT LIME.

I am now prepared to furnish Wood Burnt Lime from one of Page's Patent Perpetual Wood Burning Kilns, by the car or wagon load, promptly, and at reasonable rates, for cash. This lime is snow white and guaranteed to be entirely free from core, or any other loss whatever, being as pure as that made from oyster shells. It is drawn from the kiln every six hours, and is, consequently, evenly burnt. In proof of its purity I would mention that it is used extensively in the manufacture of glass at Wheeling and Pittsburg, in preference to all other limes.

J. D. RICHARDSON,
oct Buckeystown, Frederick county, Md.

Kettlewell's

ORIGINAL MANIPULATED GUANO.

Office No. 101 South Street, lower end of Bowly's Wharf.

The undersigned thinks he cannot present (to Virginia and Maryland Farmers at least) a more decided and satisfactory evidence of the value of his Manipulated Guano, than by simply referring to the annexed Certificates and *adding no word of his own*. If higher authority can be found in agricultural interests, it would indeed be a potential voice.

It will be seen that both Col. Bowie and Mr. Dozier's letters confirm all that the undersigned said in his advertisement in the September number of the *American Farmer* (to which he refers) in regard to the relative growth of straw from the Peruvian and the grain from "Kettlewell's Manipulated," by which so many farmers are deceived. It is admirably expressed in the letter of Col. Bowie, "the straw light and the grain full."

JOHN KETTLEWELL, or
G. OBER, General Agent,
No. 101, LOWER END OF SOUTH STREET.

CERTIFICATES.

LINDEN, Sept. 3d, 1859.

JOHN KETTLEWELL, ESQ.

Dear Sir: I promised to give you a candid statement of the result of the use of your Manipulated Guano on my crops of this year. The result of the wheat harvest in Eastern Virginia, as you know, was anything but satisfactory. I think it due to you, however, to state, that my crops were quite as good, I might perhaps say, with truth, better than those of my neighbors. I used your Guano principally, and in small quantities, in various ways. I am satisfied that the yield of grain was quite as large, indeed larger than from many fields in the neighborhood dressed with Peruvian Guano. The season was very unfavorable for all fertilizers and probably most so for Peruvian Guano, which forced the wheat forward and caused it to encounter the early rust.

I may say, however, that I am satisfied with your Guano, and shall send you a large order in a few days. Having visited your works and witnessed the manipulating process, and had from you full and candid explanations of the whole business, I am satisfied, not only of the thoroughness, but of the entire fairness of the operation. Under this impression I take pleasure in recommending your enterprize to the patronage of my brother farmers. Yours, truly,

WILLOUGHBY NEWTON.

PRINCE GEORGE'S, August 25, 1859.

JOHN KETTLEWELL, ESQ.

Dear Sir: I received your note some time since asking a word from me in reference to your Manipulated Guano. I have to say that I have used it upon wheat, oats, and tobacco, somewhat extensively, and in all cases am satisfied with the result, and shall use it so long as I obtain the same good results. I have not *experimented* with it, as compared with other Guano that I have used, but am better pleased with the results of yours than any other that I have used. My wheat and oats, where it was applied, ripened beautifully. The last sowing (with your Guano) was harvested before the early without guano—the straw light and the grain full. The tobacco ahead of that along side upon better land.

Respectfully yours,

WM. D. BOWIE.

WEST RIVER, July 24, 1859.

JOHN KETTLEWELL, ESQ.

Dear Sir: The effect of the Manipulated Guano No. 1 (procured from you) on tobacco has been so marvellous, that I consider it my duty to voluntarily furnish you with this statement.

I bought last spring only 1½ tons of it, to apply to a few knolls in an otherwise rich field—capable in good seasons of producing 30 bushels of wheat, or, on stubble, 1000 lbs. of tobacco per acre. There were, however, a few spots so poor that I felt convinced they would not pay for the labour of cultivation without being enriched. I therefore applied to them about 300 lbs. of your mixed Guanoes to the acre, broadcast and plowed in before laying off. The plants in these spots stood remarkably well, and seemed to grow off almost immediately after being set, and have continued up to this time *far ahead* of all other portions of the crop. So marked is their superiority that the eye at once traces the extent of the application of the fertilizer; and it would be well worth your while to come down and see for yourself. I am satisfied that I should have profited by a similar application to the entire field, especially as, from former experience, I have a right to anticipate a most beneficial result from its use on the succeeding crops of wheat and clover.

Respectfully, your ob't serv't,

GEO. W. HUGHES.